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INVESTIGATION OF CONCENTRATION OF ECONOMIC POWER

TEMPORARY NATIONAL ECONOMIC COMMITTEE

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LETTER OF TRANSMITTAL

U. S. DEPARTMENT OF LABOR,
BUREAU OF LABOR STATISTICS,
Washington, October 28, 1940.

Hon. JOSEPH C. O'MAHONEY, *Chairman,*
Temporary National Economic Committee,
United States Senate, Washington, D. C.

MY DEAR SENATOR: I have the honor to submit for the record this report on Geographical Differentials in Prices of Building Materials, prepared by the Bureau of Labor Statistics for the Temporary National Economic Committee.

The crucial importance of the construction industries in the American economy has long been recognized. In recent years the Federal Government has placed great emphasis on the stimulation of home building, as a means of providing better living arrangements for our people, of increasing production of materials, and of reducing unemployment. Since home building is essentially a local industry, dominated by local situations, any programs designed to promote building would clearly benefit from accurate information regarding local building costs and a better understanding of the factors which influence their behavior.

This report is designed to fill this need in some measure. It presents for the first time a comprehensive body of statistics showing the wholesale and retail prices of 37 materials important in residential construction in 50 cities located in every State in the United States and in the District of Columbia.

Detailed information regarding price structures and terms of sale—cash and quantity discounts, zone systems, basing-point systems, etc.—is also presented, so as to permit a better understanding of prices actually paid by purchasers of these materials, delivered to their localities, under different conditions.

These figures cover the entire period between January 1935 and September 1939 and make it possible, therefore, to see how the prices of building materials have been affected by major changes in the rate of business activity, such as the upswing of 1936-37 and the subsequent recession in 1937-38.

Since both wholesale and retail prices are shown, it has been possible to calculate distributive margins; to see whether the spread between wholesale and retail prices is higher in certain cities and in certain regions than in others, and to determine the effect of these spreads upon the prices paid by buyers of building materials.

This study clearly shows that building material prices, both at wholesale and at retail, vary widely not only between regions but also between cities within a single region. A somewhat greater degree of

uniformity, particularly at wholesale, prevails for most commodities which are distributed on a national scale, such as plumbing fixtures and insulation board, than for those which are produced for purely local markets, such as brick, sand, and gravel. At retail, however, prices and price trends differ markedly between regions even for the former group of materials.

It appears that, for most commodities, prices are highest in the Rocky Mountain States, which are far removed from producing centers, and lowest in the industrial Middle Atlantic and East North Central regions. This is true not only of prices but also of distributive margins; the spread between wholesale and retail prices is often widest, not only in dollars and cents, but also relatively, in those areas where wholesale prices themselves are highest.

Finally, retail prices for most of these building materials are considerably more rigid than wholesale prices. In a number of instances, in fact, changes in wholesale prices were almost completely ignored in some retail markets. Since retail prices represent what the contractor must actually pay for materials, the implications of this situation are significant.

In my opinion this monograph is worthy of the serious attention of all those who are concerned with the many problems of the construction industry. It should prove particularly useful in connection with the provision of adequate housing facilities for workers engaged in the defense program.

This report was prepared by Walter G. Keim, assisted by Joseph W. Lethco, Grace F. Grosvenor, and Philip H. Blaisdell, all members of the T. N. E. C. staff of the Bureau of Labor Statistics, with the editorial assistance of Saul Nelson, under the general supervision of Aryness Joy, assistant to the Commissioner of Labor Statistics and Director of T. N. E. C. studies for the Bureau. The Work Projects Administration of New York City provided much of the clerical assistance used in tabulating the data and computing the indexes.

Respectfully submitted.

ISADOR LUBIN,
Commissioner of Statistics.

PREFACE

This study of building material prices, prepared by the Bureau of Labor Statistics for the Temporary National Economic Committee, makes available for the first time detailed information regarding the wholesale and retail prices of leading materials used in residential building in every section of the United States. It is well known that the costs of home construction vary widely in different localities and that a considerable part of this variation is due to differences in the prices which contractors must pay for the necessary materials. A principal purpose of this study, therefore, is to provide a measure of these differences, and to determine how much more materials cost in one part of the country than another. Data have been assembled for 37 materials which are of importance in residential construction, in 50 cities, including at least one city in each of the 48 States and the District of Columbia.

Some building materials, such as brick, sand, and gravel, are generally used within a narrow radius of their point of production; and their costs of production and prices depend almost entirely upon local conditions. Other products, including most materials which require considerable fabrication, are manufactured and distributed on a regional or national scale; they must be shipped long distances from their points of production. In such cases, freight charges generally form an important element in the cost of the delivered product. However, it should not be assumed that delivered prices will necessarily vary in proportion to the costs of shipment, since different industries have adopted many different kinds of conventional practices with regard to the relation between shipping charges and delivered prices. In the case of some building materials, wholesale prices are uniform throughout the Nation. For others, prices vary between zones, and, in still others, basing-point systems or freight-equalization systems are observed. The nature of the practice actually followed in the case of each building material studied is described in detail in this report.

Retail prices, that is, the prices paid by the typical local home building contractor to the local material dealers, show even greater regional variation than do wholesale prices, since they are even more directly affected by local market conditions. In some localities the spread between wholesale and retail prices is much wider than in others; moreover, margins in the same locality may change considerably from time to time.

This survey covers the period between January 1935 and September 1939 and includes the major upswing in prices which occurred during 1936 and 1937, as well as the subsequent recession during the latter part of 1937 and 1938. While the statistics presented in this volume do not extend beyond September 1939, the Bureau of Labor Statistics

has developed a system of current price reporting with the cooperation of building material manufacturers and distributors, and it is proposed to publish current data regarding these building material prices in the future on the same basis on which they are presented here.

Most of the statistical materials presented here were gathered by a special field staff under the direction of Walter G. Keim, of the T. N. E. C. staff, and Jesse M. Cutts, Chief of the Wholesale Price Division of the Bureau of Labor Statistics. On the field staff were Elizabeth V. Minson, John M. Linton, Warren F. Looney, Martin H. Miller, Arthur W. Frazier, Bernard Topkis, Harold L. Dickinson, Joseph W. Lethco, and Philip H. Blaisdell. This monograph was written by Mr. Keim, assisted by Joseph W. Lethco, Grace F. Grosvenor, and Philip Blaisdell, with the editorial assistance of Saul Nelson, under the general supervision of Aryness Joy, assistant to the Commissioner of Labor Statistics. Vivienne Winstead and Mary L. Kent assisted in preparing the volume for publication.

The Work Projects Administration of New York City provided much of the clerical assistance used in tabulating the data and computing the indexes.

This survey would not have been possible had it not been for the splendid cooperation of many members of the industry, both manufacturers and distributors.

CHAPTER I

INTRODUCTION

During recent years increasing public attention has been devoted to the construction industry and particularly to residential housing, not only because of the importance of this industry in terms of potential employment of men, unused manufacturing capacity, and idle savings, but also because the housing industry exemplifies many of the unsolved social and economic problems which have confronted the United States during the past decade.

The construction industry is the largest single employer of labor and far outdistances other industries in the consumption of materials. Between 1919 and 1935, 15 percent of the products that were manufactured in the United States were consumed by this industry.¹

In 1929 the construction industry proper—that is, exclusive of producers of materials—employed about 5½ percent of the total gainfully employed nonagricultural workers. By 1938 it was estimated that this ratio had fallen to 4 percent.

According to Social Security Board estimates, approximately 97,000 contractors employed about 826,000 men in 1938.² In 1935 the Census of Business reported 73,186 lumber, building material, and hardware dealers with aggregate sales of 1.9 billion dollars.³

The persons engaged directly and indirectly in the construction industry constitute a cross section of the economic life of the Nation. Producers of raw materials; manufacturers of finished and semifinished products; highly skilled, semiskilled, and unskilled laborers; financial institutions; contractors; governmental agencies; social welfare workers; politicians; labor organizers; trade association executives; and even racketeers—all of these play their part in the building of a home, street, bridge, or skyscraper.

Quantitative estimates of number of men, goods, and dollars employed, however, are only part of the story of the construction industry. Failure of construction to regain the level of activity of the twenties has been one of the main factors contributing to the unemployment problem.

Between 1929 and 1937, the 2 peak years for general industrial activity, excluding building materials, there was a net gain in manufacturing employment of roughly half a million workers. This amounted to a 6.2 percent increase,⁴ which was approximately the same proportion as the rate of population growth during that period.

Although employment in the durable goods industries in 1937 generally equaled that of 1929, many building material industries

¹ Testimony of Isador Lubin, Temporary National Economic Committee Hearings, Part 11, "Construction Industry," pp. 4942, 4943.

² Ibid., Exhibit 847, p. 5504.

³ Ibid., Exhibit 879, p. 5506.

⁴ A. F. Hinrichs, Trends of Employment Opportunity, p. 19. Mimeographed release by Bureau of Labor Statistics, February 22, 1940.

failed to show a comparable degree of recovery. Thus employment in the manufacture of water-heating apparatus recovered to only 90 percent of 1929, lumber-sawmill employment to 70 percent, lumber-millwork to about 65 percent, cement to 75 percent.⁵ In other words, employment in durable goods industries and in manufacturing generally was held back substantially by stagnant demand for construction materials.

Furthermore, the housing industry has apparently failed to produce homes within purchasing reach of its largest potential market. Forty-eight percent of the homes built in 1938 were valued at \$6,000 or more, whereas only 15 percent of American families can afford so large a housing investment. Only 48 percent of American families can afford to buy or rent homes selling for \$4,000 or less, whereas only 20 percent of the homes built fall in that class.⁶

It has been said that the prerequisite to sound recovery in building is the reduction of costs to the point where homes can be sold for \$3,000 and less. There is considerable conflict of opinion as to whether such a program is practicable. According to Robert L. Davison, of the Pierce Foundation, "Ninety percent (of the building contractors) said it couldn't be done and 10 percent said they were doing it and making money."⁷

The problem of cost reduction involves the question of material prices. According to Dr. T. S. Kreps, in June 1937 the relative importance of material costs as compared to labor costs in residential building in 26 cities varied between a high ratio of 77-23 in Wichita, Kans., to a low of 58-42 in Chicago, Ill.⁸

In appraising the behavior of building material prices, it is important to recognize the wide variations displayed by these prices from region to region. Housing is in many ways a local industry; each housing unit is a separate assembly point. The manufacture of building materials is divided among national, regional, and local industries.

The ratio of freight charges to value of building materials at destination varies from 4 percent for paints, oils, and varnishes to as high as 57 percent for gravel and sand.⁹ High freight rates relative to value mean wide distribution of plants when, as in many building materials, raw material suitable for manufacture is abundant on a wide geographical scale.

The distribution of plants engaged in the manufacture of materials for building, the essentially local nature of the housing industry, the presence in almost all cities of large numbers of retail building material merchants operating with varying degrees of cooperation, require a region-by-region, city-by-city, and sometimes district-by-district study, if an adequate and realistic picture of price structures is to be obtained.

Until recently there have been no satisfactory statistics regarding these regional price differences. In the last few years the home loan agencies have compiled data on costs of constructing a standard house in various sections of the country to aid in evaluation purposes. During the same period the Work Projects Administration and other

⁵ Testimony of Isador Lubin, loc. cit., p. 4937.

⁶ Ibid., Exhibit 846, p. 5479.

⁷ Testimony of Robert L. Davison, Temporary National Economic Committee Hearings, Part II, "Construction Industry," p. 4985.

⁸ Ibid, p. 4988.

⁹ Interstate Commerce Commission, Statement No. 3747, October 1937.

agencies, which have been obliged to fix wage rates for construction work, have studied wage rate levels.

A survey by the Federal Home Loan Bank Board revealed that a standard house which cost \$4,886 to construct in Columbia, S. C., and \$5,248 in Richmond, Va., would cost \$7,260 in Chicago, Ill., and \$7,134 in Great Falls, Mont. The table below shows the cities having the highest and lowest costs for the standard house in June 1937.

Cities	Building cost ¹	Distribution of direct costs ²	
		Materials	Labor
Highest:		<i>Percent</i>	<i>Percent</i>
Chicago, Ill.	\$7,260	57.7	42.3
Great Falls, Mont.	7,134		
St. Paul, Minn.	6,911		
Springfield, Ill.	6,980		
White Plains, N. Y.	6,857		
Lowest:			
Salisbury, N. C.	4,746		
Columbia, S. C.	4,886		
Ashville, N. C.	4,968		
Richmond, Va.	5,248	70.1	29.9
Little Rock, Ark.	5,285		

¹ Source: Federal Home Loan Bank Board, Federal Home Loan Bank Review.

² Temporary National Economic Committee Hearings, Part 11, Construction Industry, Exhibit No. 942, p. 5571.

According to this survey, costs of the complete unit were generally highest in the northern cities and lowest in the southern area. The north central cities had higher costs than the cities in the northeastern area. However, the pattern is not uniform and this statement is merely indicative of a general tendency. (See table 1, appendix B, p. 443.)

Material costs and labor costs in residential construction run in the ratio of approximately 1½ to 1. A change in either factor has a major influence on the total cost of a house. Consequently, it is important that adequate data concerning these major elements be available in order to understand the factors governing geographical differentials in building costs.

Studies of the Work Projects Administration show the wage rates for the important occupations in the building trades.¹⁰ The regional differentials for 5 trades are shown in the following summary. (The regional break-down is that used by the census.¹¹) The averages were based on the rates for 49 cities, 1 city, usually the largest, in each State. A distinct geographical difference is noted. The wage rates in regions II and III, including the large cities, New York, Philadelphia, Cleveland, Detroit, and Chicago, are generally higher than rates in other parts of the country. The far West and the Rocky Mountain regions were also in the higher bracket. The lowest rates are to be found in the southern areas.

¹⁰ Work Projects Administration, Hourly Wage Rates for W. P. A. and for Private and Other Public Construction, 1938, Selected Occupations, Washington, D. C., July 1939. This bulletin contains information bringing up to 1938, data originally collected and published in the study, Wage Rates and Hours of Labor in the Building Trades, prepared in 1936 under the direction of Herman B. Byers, Chief of the Division of Construction and Public Employment, Bureau of Labor Statistics.

¹¹ The census summarizes its data under the 9 following geographical divisions: New England, Middle Atlantic, East North Central, West North Central, South Atlantic, East South Central, West South Central, Mountain, Pacific.

Region	Brick-layers	Carpenters	Painters	Plasterers	Plumbers
I. New England.....	\$1.375	\$1.035	\$0.950	\$1.403	\$1.300
II. Middle Atlantic.....	1.680	1.460	1.253	1.687	1.647
III. East North Central.....	1.576	1.342	1.320	1.568	1.510
IV. West North Central.....	1.410	1.126	1.093	1.404	1.274
V. South Atlantic.....	1.444	1.116	1.026	1.362	1.273
VI. East South Central.....	1.533	1.128	1.028	1.453	1.378
VII. West South Central.....	1.400	1.076	.952	1.400	1.250
VIII. Rocky Mountain.....	1.486	1.228	1.145	1.563	1.360
IX. Pacific.....	1.450	1.160	1.150	1.533	1.417
United States.....	1.484	1.186	1.102	1.486	1.379

Part of the sizable regional differences in building costs can be traced to these geographical variations in wage rates. Variations in taxes, insurance, and other incidental costs result in further differentials. One of the most important factors in the regional differences is material costs. The present study is directed to defining and analyzing these differences in the delivered prices of building materials which are commonly used in residential construction.

SCOPE OF THE STUDY

The Bureau of Labor Statistics has for many years collected and published wholesale prices of building materials. These prices are for the most part quotations at base point or plant. Therefore, while they are readily adaptable to the purpose of constructing general indexes, they do not reveal the levels or trends of prices paid by distributors in different localities. The primary object of this study is to assemble statistics on prices for sales to distributors, delivered to yard, and to consumers, delivered to job site. To obtain adequate geographical coverage one important city was selected in each State, except Texas where, because of its size, two cities were chosen. In all but a few cases these cities were the largest in their respective States.

LIST OF CITIES INCLUDED IN THE BUILDING MATERIAL SURVEY

Region I. New England

- A. Portland, Maine.
- B. Manchester, N. H.
- C. Burlington, Vt.
- D. Boston, Mass.
- E. Providence, R. I.
- F. Hartford, Conn.

Region II. Middle Atlantic

- A. New York, N. Y.
- B. Trenton, N. J.
- C. Philadelphia, Pa.

Region III. East North Central

- A. Cleveland, Ohio.
- B. Detroit, Mich.
- C. Indianapolis, Ind.
- D. Chicago, Ill.
- E. Milwaukee, Wis.

Region IV. West North Central

- A. Minneapolis, Minn.
- B. Fargo, N. Dak.
- C. Sioux Falls, S. Dak.
- D. Des Moines, Iowa.
- E. Omaha, Nebr.
- F. Wichita, Kans.
- G. St. Louis, Mo.

Region V. South Atlantic

- A. Wilmington, Del.
- B. Baltimore, Md.
- C. Washington, D. C.
- D. Charleston, W. Va.
- E. Richmond, Va.
- F. Charlotte, N. C.
- G. Charleston, S. C.
- H. Atlanta, Ga.
- I. Miami, Fla.

LIST OF CITIES INCLUDED IN THE BUILDING MATERIAL SURVEY—continued

Region VI. East South Central

- A. Louisville, Ky.
- B. Memphis, Tenn.
- C. Birmingham, Ala.
- D. Jackson, Miss.

Region VII. West South Central

- A. Little Rock, Ark.
- B. Oklahoma City, Okla.
- C. Austin, Tex.
- D. Houston, Tex.
- E. New Orleans, La.

Region VIII. Rocky Mountain

- A. Butte, Mont.
- B. Boise, Idaho.
- C. Cheyenne, Wyo.
- D. Denver, Colo.
- E. Salt Lake City, Utah.
- F. Reno, Nev.
- G. Phoenix, Ariz.
- H. Albuquerque, N. Mex.

Region IX. Pacific

- A. Seattle, Wash.
- B. Portland, Oreg.
- C. Los Angeles, Calif.

None of the industries included in the study actually relate their price structures to the census regions. Among the important factors which shape the price structures are the location of the production center, the source of raw material, and principal sales areas. The pattern of price variations is not uniform. It was decided, therefore, to use the census regions in this study of building material price differentials, in order to provide a common basis for summarizing the price data for the various products.

MATERIALS CONSIDERED

Since this study is primarily concerned with the prices of materials important in residential construction, the specifications were limited to the lighter building materials. Steel construction, heavy piling, and the like, which are important in heavy construction, were not included.

In selecting the construction materials for which prices were to be collected, a sample survey of certain cities which revealed the distribution of expenditures for a standard residence in 1937 was utilized.¹² The proportion of total cost going to the various products, as indicated by that survey, is shown below:

Item	Range of proportion for selected cities			
	High		Low	
	City	Per-cent	City	Per-cent
Lumber.....	St. Paul, Minn.....	55.4	Houston, Tex.....	41.4
Mason materials.....	Houston, Tex.....	22.3	Milwaukee, Wis.....	12.3
Plumbing.....	Portland, Oreg.....	15.2	New Orleans, La.....	10.4
Boilers, radiators, and fittings.....	Spokane, Wash.....	10.1	Pittsburgh, Pa.....	6.2
Hardware, miscellaneous.....	Houston, Tex.....	3.4	Cleveland, Ohio.....	2.3
Painters' materials.....	(Los Angeles, Calif.....)		Milwaukee, Wis.....	2.1
Miscellaneous items.....	Houston, Tex.....	3.1	New Orleans, La.....	4.3
	Detroit, Mich.....	7.7		

After determining the materials to be studied, specifications were drawn for representative products, terms, and conditions of sale. In general, the particular grade of each material chosen for pricing was the one which constituted a large proportion of the total value of that

¹² Compiled by Dr. T. J. Kreps from files of Home Owners' Loan Corporation.

industry's output. Most of the products are used in residential construction throughout the United States. In some cases, however, the products selected have only limited use in certain areas, and it was necessary to substitute other items in these regions. For example, southern pine lumber and millwork are not handled to any extent in the Pacific and Rocky Mountain areas where Ponderosa and northern pine are readily available, while the latter products are not used in the South.

Specifications of each commodity were drawn for both retail and wholesale pricing. Retail prices were defined as those paid by contractors to the distributors for materials delivered to the job site. Wholesale prices refer to those paid by distributors to the producers or manufacturers for materials delivered to the freight yards of the city. The specifications include physical features of the product, the unit of sale, the quantity (generally carlots at wholesale), the point of delivery, and other relevant terms and conditions of the transaction.

The 37 commodities selected for survey are shown below. Complete details of the specifications are presented in Appendix C.

LIST OF PRODUCTS

Insulation board.	Windows, Ponderosa pine.
Plaster.	Boiler, heating.
Asphalt roofing.	Radiation.
Cement.	Boiler, range.
Lime.	Closet.
Paint:	Lavatory.
Outside.	Sink.
Inside.	Bathtub.
Enamel.	Brick:
Varnish.	Common.
White lead.	Face.
Linseed oil.	Sand and gravel.
Turpentine.	Stone, crushed.
Southern pine boards.	Tile:
Ponderosa pine boards.	Floor.
Northern pine boards.	Building.
Oak flooring.	Sewer pipe.
Fir dimension.	Concrete, mixed 1-2-4.
Doors:	Glass, window.
Fir.	
Ponderosa pine.	

METHODS OF COLLECTION

The program was organized to collect wholesale and retail prices for each of the 37 materials in 50 cities. It was intended originally to obtain both wholesale and retail prices for each item, but this was not possible in each case. Products which are produced and marketed locally are generally sold direct to consumer—in this case, the contractor. Brick, sand and gravel, crushed stone, and ready-mixed concrete fall in this category. For one other item, floor tile, prices quoted by manufacturers to contractors were obtained, inasmuch as the direct sale is the most popular channel of distribution in most cities.

Most brick companies, although they distribute their own products, have arrangements with various other local dealers and multi-line distributors, and pay a commission of \$1 per 1,000 on sales made through these outlets. These commission agents negotiate the sales but deliveries to customers are handled by the producers. Actually, how-

ever, the retail price is that charged by the producers whether it be on goods sold direct to consumers or through commission agents. No wholesale price, as defined in this study, could be quoted on such transactions.

Obviously, retail prices, distributor to contractor, could be obtained from dealers in each city, but collecting the wholesale prices required a different procedure. In most instances, the manufacturers of the materials were not located in the cities covered by the survey. However, many producers whose distribution is Nation-wide were able to furnish trends or prices which they charge their middlemen in each city. This, of course, facilitated the collection of data for a call at the office of a producer whose products are distributed on a Nation-wide basis generally made available wholesale prices in the 50 localities included in the study. The survey was not limited to these large firms. Efforts were made to obtain from representative manufacturers the prices of products popular in each area. Consequently in nearly every city, three or more wholesale prices were obtained, some from local producers and some from national distributors.

The field representative attempted to obtain a complete monthly series of prices from 1935 to date from each seller for each product. During the interview, arrangements were made for the respondent to furnish monthly reports to the Bureau. In addition to the price data, the seller frequently volunteered much valuable information regarding methods of distribution and other elements of the price structure.

DESCRIPTION OF THE INFORMATION

The retail prices represent quotations made by the distributors to contractors, for material delivered to job site, in average quantities, for residential construction. These data were obtained from various types of distributors. Retail lumber yards were usually valuable sources of information. The typical yard carries many products in addition to lumber and millwork, including, for example, insulation board, lime, plaster, and cement. Most of the materials are sold at retail through independent distributors, but for a few products the manufacturers' own retail stores are a popular outlet. Paints, especially in the large cities, are often sold through producer-owned distributors; more generally, however, the distributing firm is privately owned by contracts to handle the product of one manufacturer exclusively. The reporting business firm was asked to give the complete history of monthly prices from 1935 to date, but records were frequently inadequate for this purpose. Therefore, many of the series show only current price levels and price data over a relatively short period. The Bureau's agents sometimes found it necessary to visit many sellers before they were able to get complete information. Consequently, more data are available for the current period and the immediate past than for the earlier years.

When the distributor did not sell the item specified but handled a similar product, the agent was instructed to substitute the price of such an item but to mark it as suitable for "trend only." The difference in specification, of course, precluded its use in computing the actual price level.

As stated earlier, retail quotations sought were on materials delivered to the job site. This element represents a considerable increment to

the final price even within the city, and it was necessary to ask for delivery at prices to the current most popular home building locality in each city in order to maintain comparability of transportation charges between dealers. The distributor usually divides the metropolitan area into zones. At least one of these is a free zone, within which all materials are delivered without any specific charge for transportation. Delivery charges are established in other zones according to distance from sellers' yards.

In the wholesale market, in most cases, the price to distributors is for delivery at destination point, distributor's siding if available. If the distributor has no siding he collects the material at the railroad yards. For some products, however, such as lumber (including southern pine and Ponderosa pine boards, fir dimension, and oak flooring), prices are quoted f. o. b. mill or basing point. In these cases, the mill or base prices are reported. The destination prices are then derived by adding rail or water freight from the shipping or basing point to the locality in question. For some materials, such as paint, prices to some of the cities were quoted directly, while prices in others had to be computed by adding freight.

The quantity purchased is, almost without exception, an important factor in determining the price quoted by any seller, whether at wholesale or retail. Producers selling at the wholesale level to distributors and to large users generally use a complex system of quantity discounts. Most of the materials are quoted in carlots, which constitute by far the greater portion of wholesale transactions. But in the case of products for which quantity discounts are granted on less than carlot shipments, as in the paint industry, for example, the specification used relates, as nearly as possible, to a typical quantity.

Although the size of purchase is not as important a factor in retail prices as it is in wholesale prices, quantity discounts are available from retailers to contractors as well as from manufacturers to distributors. However, the practice is not uniform in the retail market, depending on competitive conditions and the type of buyer and seller. Although the retail lumber yard does not operate on the basis of a detailed system of quantity discounts, the largest contractors in an area often receive some price concessions because of the size of their purchases. These concessions are commonly based on total value of all purchases rather than on the amount of any particular item bought. Most lumber yard dealers report that allowances to contractors vary widely and are subject to many considerations, including credit rating, paying ability, size of purchase, prospect of future business, and willingness to concentrate orders rather than to distribute them among various dealers. Retail prices on exceptionally large or small orders are very difficult to obtain and, moreover, are not representative of price movements on the bulk of goods sold. A representative price is obtained by taking the going price for "average" quantities, or prices to the "average" size contractor engaged in residential building, and this was the quotation for which the agent asked. The specifications used for retail pricing call for the standard units generally quoted in the industry; e. g., per thousand board feet of lumber, per gallon of paint, etc.

PREPARATION OF SUMMARY DATA

In summarizing these data, the first step was to assign a code number to each region, city, and respondent or reporter.

All the information from the various schedules was tabulated to show the available prices from 1935 to 1939 for all the companies. Where the prices were obtained for off-specification items, they were tabulated on a separate sheet marked "trend only." Upon completion of the initial recording, a "representative" price series was selected for each item and city, thus presenting an actual price, rather than an arithmetic average. (This was the crucial stage of the processing work for it was here that the going level of price was determined.) For most materials, there was a range of prices within each city. The question arose, therefore, as to whether an arithmetic average of the price quotations obtained in a city should be used in determining the prevailing level of prices in that area. The primary factor to be considered in selecting a representative price for paint, for example, was the comparability of the series from city to city. Obviously an average of prices for one city would not necessarily include the same components as the average in another city. Moreover, averages have a degree of unreality since sales are rarely made at these levels and occasionally nominal quotations pull an average out of line. It was decided, therefore, to select as the going price the series furnished by a dealer who was a representative seller¹³ of the commodity in the particular locality. The index numbers and other compilations used in this study have been based on these representative series. If, later on, another dealer's price becomes more representative, it will be necessary to make an adjustment in the index.

The primary purpose of the study is to show how delivered prices varied throughout the country in wholesale and retail markets. Another important phase of the study is to present the trends of prices for the period 1935 to September 1939 for each item. The variations in trends of wholesale and retail prices reflect the retailers' spread.

Weighted indexes for each building material were computed both for wholesale and retail for the several regions and for the United States. For this purpose, weighting factors for each city were based on the total dollar volume of new residential building for which permits were issued during the period 1937-39.¹⁴ (For complete data see table 2, appendix B.)¹⁵ A single exception was made in computing the wholesale indexes for Portland cement. In this case, the index of the Wholesale Price Division of the Bureau of Labor Statistics was broken down by regions corresponding to those used in the survey and the index was converted from a 1926=100.0 base to July-September 1939=100.0. This necessitated the use of some cities not

¹³ The Bureau's agent attempted to obtain prices from established sellers in the community, concerns which had been in business for a long period, carried stocks of the material being priced were important factors in the sales for the locality, and whose prices were average or represented the prevailing level. The concern which best answered these qualifications was considered to be "representative."

¹⁴ That is, the weighting factor for each city is the ratio of the volume of building permits for that city to the total volume for all cities included.

¹⁵ Based on data collected by the Division of Construction and Public Employment, U. S. Bureau of Labor Statistics.

covered by this survey in addition to many of the survey cities. (For a complete list of the cities used see footnote 9, p. 92.) However, the retail price data for cement were weighted in the same way as the other products covered.

The following chapter presents the results of this study for all the products indicating the salient points of market conformity and variation. This is followed by a series of chapters dealing with individual products or groups of products in detail, describing both general market characteristics and price trends.

CHAPTER II

SUMMARY AND CONCLUSIONS

This study of prices of building materials reveals a very wide diversity of marketing practices, price behavior, and price relationships, not only between different kinds of building materials in national markets but for the same material in different regions and even in neighboring localities. Nevertheless, certain broad tendencies are evident. It is the purpose of the present chapter to present these tendencies and to describe, in summary, the way in which the leading building materials are marketed.

The location of the producing industries is first discussed, together with the degree to which the production of certain materials is concentrated in the hands of a few leading concerns. The details of the price structure are next compared, with emphasis upon the type of geographical price system, zone, basing point, etc., observed in each case. Actual prices are then summarized to show the extent of the geographical differences, both at wholesale and retail, price trends for the period covered by the survey, and the margins between wholesale and retail prices for different commodities in different localities.

AREAS OF PRODUCTION

Numerous industries, operating under many different price and market structures and in many different parts of the country, furnish the basic materials for building construction. For example, a home in Washington, D. C., probably contains Douglas fir doors and Ponderosa pine windows, window frames, and other trim work from the far Northwest and the Midwest; fir dimension timbers from the Northwest or heavy pine from the South; oak flooring from the South; heating boilers, radiation, paint, insulation board, and roofing from Minnesota, New York, or New Jersey; plumbing supplies from Wisconsin, Illinois, or Ohio; window glass from West Virginia and Pennsylvania; lime from Pennsylvania and West Virginia; and cement, brick, sand, gravel, and crushed stone from nearby sources.

Naturally, certain lumbers and other materials are produced sectionally and encounter the competition of substitutes only to a limited extent. Yellow pine, for example, is produced and sold almost exclusively in the South. Red cedar shingles is the popular form of roofing in the northwestern States which, of course, limits the sale of prepared shingles in that area. Douglas fir and Ponderosa pine dominate lumber sales in the North.

Nevertheless, all these products are used to varying degrees outside the regions where they are produced. Southern pine is sold all over the east and as far north and west as Chicago. Ponderosa pine millwork and certain types of fir materials, although produced in one part of the country, have almost Nation-wide use. Hence, even for so-

called sectional materials, sales may be made over wide areas and transportation becomes a considerable factor in the delivered price.

Although other manufacturers of building materials are not as dependent upon a single source of basic raw materials as are the lumber producers, nevertheless, there is a tendency for the manufacture of each material to center in a single region. Availability of raw materials, labor, and transportation facilities, as well as nearness to centers of demand, are always important factors in the consideration of plant location. For some commodities, the fact that a leading producer happens to be located within the borders of a certain State may result in a high degree of geographical concentration. The relative concentration of production for the various material producing industries is shown in the following summary, which does not, however, include the widely decentralized industries such as sand, gravel, and stone.

Material	Number of producing States	Center of production	Percent of total output in center of production ¹
Insulation materials, including board	23	Minnesota, Indiana, Illinois	36
Plaster	25	New York, Michigan, Iowa, Texas	(2)
Asphalt roofing	26	Illinois, Ohio, Pennsylvania, New York, Minnesota	55
Cement	35	Pennsylvania, California, Texas, Michigan	41
Lime	38	Ohio, Pennsylvania, Missouri	50.4
Paints	41	New Jersey, Illinois, New York, Ohio	54
Linseed oil	10	Minnesota, New York, New Jersey, California, Pennsylvania	(3)
Turpentine	8	Georgia, Florida, Alabama	93
Southern yellow pine	19	Alabama, Texas, North Carolina, Mississippi, Arkansas, Louisiana	69
Ponderosa pine	12	Oregon, California, Washington	79
White pine	26	New Hampshire, Maine, Minnesota, Washington, Idaho	82
Oak lumber	37	Louisiana, Tennessee, Arkansas, Mississippi, West Virginia, Virginia, North Carolina, Kentucky	68
Douglas fir	10	Washington, Oregon	95
Doors	48	Iowa, Wisconsin, Illinois, Washington, Oregon, California	68
Windows	48	Iowa, California, Wisconsin, Illinois, Washington	57
Boilers, heating and radiation	46	Illinois, Pennsylvania, Ohio, California, New York	52
Plumbing fixtures	13	Wisconsin, Pennsylvania, Ohio, Illinois, Michigan, California	60
Structural clay products	48	Ohio, Missouri, California, Pennsylvania	50
Window glass		West Virginia, Pennsylvania	68

¹ Based on data in the Census of Manufactures and Minerals Yearbook for value of product in 1937 and 1938.

² Data for Louisiana not included, to avoid disclosure of product of individual company.

³ No data available.

CONCENTRATION OF PRODUCTION

In many of the industries covered in this study, a large proportion of the total output is in the hands of a few leading concerns. This means, of course, that these companies distribute on a national scale, commonly under identifying brands or trade-marks, and often with the aid of extensive advertising. In fact, the following summary shows that with the exception of the lumber industries and the purely local industries, such as brick and tile, control of the production of most building materials is enjoyed by a relatively small number of large concerns.

Material and percent of total manufactured by 4 leading companies, 1937

Material	Manufactured by 4 leading companies, 1937 (percent of total output)	Material	Manufactured by 4 leading companies, 1937 (percent of total output)
Insulation board.....	82	Oak flooring.....	² 30-35
Plaster.....	85	Douglas fir.....	23
Asphalt roofing.....	42	Closets.....	61
Cement.....	¹ 29	Lavatories.....	69
Boilers, heating.....	55	Sinks.....	64
Radiation.....	61	Bathtubs.....	73
Boilers, range.....	42	Brick:	
Paints, various.....	33	Face.....	16
Enamel.....	59	Common.....	7
Varnishes.....	29	Tile:	
White lead.....	91	Floor.....	63
Zinc oxide.....	87	Building.....	25
Yellow pine.....	7	Sewer pipe.....	37
Ponderosa pine.....	16	Glass, window.....	85

¹ Structure of the American Economy, National Resources Committee, p. 256.

² Reported by the industry.

Source: U. S. Department of Commerce.

The data presented in this table do not tell the whole story in all cases. In industries producing for narrow local markets, the degree of local concentration, not national concentration, is significant. Thus, while only 7 percent of the total production of common brick in the United States is in the hands of the 4 largest producers, there are many localities in which the entire output is produced by one or two companies. The high cost of shipping such heavy products as brick over considerable distances effectively protects these localities from outside competition.

MARKET STRUCTURE ¹*Geographical Pricing Practices.*

Completely uniform market practices prevail in very few industries and individual producers may alter their policies from time to time and observe different practices in different sections. Almost without

¹ These analyses of market structures—pricing methods, discount practices and the like—are based on information obtained from interviews with most of the important producers in each industry included in the study. In the following pages an attempt has been made to summarize the practices most prevalent in each industry as a whole. It is not to be inferred, however, that the practices described here necessarily apply to all producers in any one industry. Thus, most building-material manufacturers follow different practices on the west coast than east of the Rocky Mountains. However, within these geographical limits marketing practices have a strong tendency toward uniformity for a number of the materials considered in this study which are produced by a relatively small number of firms.

In the following industries, a sufficient number of interviews were conducted with important producers and trade-association executives to lead to the conclusion that market patterns are fairly uniform: east of the Rocky Mountains; insulation board, asphalt roofing, cement, white lead, turpentine, linseed oil, plumbing supplies, heating equipment, and window glass. In the plaster industry, consultation with leading manufacturers indicates that a freight-equalization system was generally used in that industry, but the study was not sufficiently detailed to determine whether this amounted to a basing-point system in some sections of the country. In the ready-mixed paint industry the general pattern of pricing is similar for all large companies, but detailed discount provisions and zoning arrangements often vary, and small- and medium-sized paint manufacturers follow a variety of practices. In the lime and range-boiler industries, the information obtained appears to indicate that where pricing practices are formalized the lines are drawn on a regional or sectional rather than Nation-wide basis.

Structural clay product manufacturers and aggregate material producers were interviewed in most of the 50 cities visited. It appears that, although the producers are widely scattered geographically, general pricing practices follow a fairly uniform regional and Nation-wide pattern, although differences occur in some cities at times.

In the lumber and millwork industry information at hand is less comprehensive than for most of the other products studied. The number of manufacturers in this industry is so large that it was impossible to obtain information from more than a very limited proportion of the producers and, while certain broad generalizations have been drawn in the following discussion, they are offered as a general description and should be used with considerable reservation.

In each case the market structures described are those prevailing during September 1939 and do not reflect any changes which may have occurred subsequently.

exception, however, the producers of building materials quote delivered prices, either as a systematic practice designed at least partly to assure uniformity as between sellers, or merely as a convenient manner of quotation.

With regard to the form of quotation, there are two different practices. In some cases, the seller quotes the delivered price including freight, prepays the freight, and the buyer remits the total delivered price to the seller. In other cases the buyer pays the freight on receipt of shipment, subtracts it from the invoice total and remits the balance. Prepayment of freight is a convenience to the buyer and is often considered a subtle form of allowance, inasmuch as dealings between him and the transportation agency are eliminated, and he has the use of the actual sum of money involved for an additional period between receipt of shipment and payment to the seller.

However, these comments refer merely to the form of quotation, and do not affect the more important matter of the way in which delivered prices of these materials actually vary from city to city in relation to the location of the producing plant. In general, there is a marked tendency in all of the industries operating beyond a local market for producers to adopt methods designed to equalize prices with those of their nearest competitor in each locality. The actual practices vary widely between industries, depending upon such factors as the nature and intensity of competition, the relative importance of freight costs in relation to the price of the product, the customs which have developed during the growth of the industry, etc. In some cases the producer may meet competition in areas remote from his plant simply by reducing his own net returns by an amount sufficient to "equalize" delivered prices with those of the most favorably located competing plant. In other industries, more formal or more complex schemes for arriving at equality of delivered prices have been developed.²

The more common types of geographical price structure used in the building material industries are—

- (a) One-price f. o. b. plant system.
- (b) F. o. b. plant system, with unsystematic variations to meet peculiar local competitive conditions.
- (c) Multiple mill base or freight equalization system.
- (d) Multiple basing-point system.
- (e) Multi-zone system, with uniform delivered prices throughout each zone.
- (f) Uniform delivered prices to all destinations.

(a) The "one price" f. o. b. plant system occurs when a producer's net realization at the plant is the same from all buyers of a particular class regardless of the destination of the shipment. This plan is seldom adhered to rigidly by any of the producers of building materials. Producers of turpentine generally follow this practice, since they are all located in the same freight zone, but a few producers outside the Savannah zone nevertheless use Savannah as a base, departing from the uniform net realization system. The formal and first asking price of many of the basic lumber items is usually f. o. b. plant, plus freight, but cuts are frequently made, according to reports, to "meet competi-

² This entire problem of geographical price structures throughout industry is described in detail in Monograph I, Price Behavior and Business Policy—Part II, prepared by the Bureau of Labor Statistics for the use of the Temporary National Economic Committee.

tion" or "to get the business." Freight rates as approved by the Interstate Commerce Commission generally vary widely on short hauls, hence there is considerable variation in delivered prices at destinations near the source of supply.³ On long hauls, however, "blanket" rates apply to many destinations in the same general area. For example, on shipments of Douglas fir dimension lumber from Portland, Oreg., a rate of 82 cents per 100 pounds applies to a group of 16 States bounded by Michigan, West Virginia, Washington, D. C., and Maine. Consequently the same freight increment is added to the price at Portland, Oreg., and a uniform delivered price prevails in the whole eastern area described above. The blanket freight rates apply whether freight is delivered by water or rail. Water rates are the same from any port on the Pacific Coast to any port on the eastern seaboard.

(b) In the sale of some building materials, for example, lime in certain areas and some types of lumber, there are unsystematic price variations in which the prices in particular markets bear no direct relation to shipping costs. In these cases, destination prices are quoted to meet a peculiar competitive situation, created either by a rival seller of the same product or by the producer of a competitive product.

(c) The producers of window glass and plaster adhere strictly to a systematic method of freight equalization. According to reports, producers equalize freight and plant prices to arrive at a uniform delivered price at each destination. It is interesting to note that full equalization is most successful in those industries which have relatively few producers (for example, window glass and plaster), while only limited equalization occurs in industries which have a larger number of producers. Lime, sewer pipe, roofing, heating boilers, and radiation have equalization systems which are widely observed, but many sellers limit their freight allowances to certain destinations. In distributing heating boilers, for example, the manufacturer limits the allowance of freight charges to 30 cents per 100 pounds at certain destinations while equalizing fully at others. Prices of certain types of floor tile are quoted f. o. b. plant with freight equalized with competing plants on carlot orders. On other types, only limited equalization is practiced.

(d) Several of the building material industries use the multiple basing-point method in distributing their products. Under this method delivered prices in different localities vary in accordance with shipping costs from one or more "basing points" recognized by the industry. These points usually represent important producing centers, but there are some plants which are not located at any basing point. In the distribution of cement, numerous basing points are employed, most of which are producing points. There are, however, some plant locations which are not at, or immediately adjacent to, basing points.

For oak flooring, only three basing points are used in computing delivered prices: Johnson City and Memphis, Tenn., and Alexandria, La. The delivered price to any destination is the lowest sum of the price at any basing point, plus freight from such basing point to destination. This delivered price is rounded to the nearest 50 cents.

³ Although there is a variation in short-haul freight rates which, if used, would cause a considerable variation to buyers in producing areas, the use of truck hauls has a tendency to reduce these variations.

Freight rates are published from each basing point to all destinations in order to insure uniformity of calculation.

In the lime industry, the basing-point system is followed in a few sections of the country, but in general the freight equalization system is used. The wide geographical distribution of small companies and plants in this industry makes difficult the maintenance of a consistent Nation-wide pattern.

During the operation of the N. R. A. code, southern yellow pine was for a time sold under a basing-point structure with several important producing localities as bases. However, this system has not been effective in recent years as delivered prices are computed f. o. b. plant, plus freight, equalized to meet competition.

(e) The zone price structure is, perhaps, the most common system encountered in the building industries. This means that delivered prices are uniform throughout a defined geographical area. In sales of certain products, the zone pattern supplements some other system, such as freight equalization. Large producers in the asphalt roofing industry, for example, utilize a regional method of quoting list prices, probably determined by the location of plants. Insulation board is another example of the same plan.

The zone system is also used in determining the delivered prices of paint. The common practice is for large manufacturers to divide the country into zones and to quote delivered prices, full freight allowed, to every "jobbing center" in each zone. (Jobbing centers are warehousing points for any member of the industry.) Delivery is made without charge to any points in these cities and in the immediately surrounding areas. When sales are made in a locality not classed as a jobbing center, shipment is made from the warehouse which is nearest, freight-wise, and the buyer pays the freight costs. The zones are not the same for all firms, but the pattern is fairly uniform. The base zone for paint usually includes the States in the Middle Atlantic and East North Central areas. The second zone includes the States around the edge of the base zone, and, in some cases, all the South Atlantic and the New England States. The third zone includes the remainder of the South and Southwest areas and some of the West North Central States. Zone 4 is usually the Rocky Mountain States. The Pacific States are considered a base or first zone by several large manufacturers who have production facilities in that area. Other manufacturers classify the Pacific States in the second or third zones.

The difference in base prices between zones is usually 5 to 7 cents per gallon. That is, zone 2 is 5 cents above zone 1; zone 3, 10 cents above; zone 4, 15 cents above, etc. The zone differential between the warehouse prices varies with the different producers and occasionally varies between the different liquid paint products of a single concern.

Manufacturers of doors divide the country into zones for pricing purposes. Wholesale prices of doors are quoted as discounts from a standard list used by all manufacturers. These discounts range up to 75 and 85 percent. One firm reports 21 zones. Prices are quoted in mixed carlots, freight allowed, in each zone. Doors are delivered in the mill zone at the f. o. b. mill price. Differentials quoted by one manufacturer for the various zones ranged from 10 to 70 cents per door.

A zone structure is also used in distributing linseed oil and white lead. In the determination of prices of linseed oil, one of the largest producers divides the country into eight zones, according to distance

from producing point. Delivered prices are the same to all destinations within a zone.

Most paint dealers have an agency contract with one of the large white lead producers. The agency contract provides for sales on a consignment basis, with payment to the manufacturer being made as the product moves from the shelves of the dealer, and with retail prices determined by the producing company. Price lists are furnished by the manufacturer. With fixed differentials between prices paid by dealers, painters, and the over-the-counter trade, wholesale prices are set on a zone basis. The base or "par" zone comprises about one-half of the country with three or four other zones making up the remainder. Zones are referred to as " $\frac{1}{8}$ cent" zone or " $\frac{1}{2}$ cent" zone according to the differential above the price in the "par" zone. Prices are uniform within zones.

Range boilers are sold on an f. o. b. shipping point basis, subject to freight allowances which are determined for the most part by a zoning system. Full freight is allowed in the base zone, and varying schemes of freight equalization are provided for points outside of this zone. For example, one large manufacturer allows full freight in zone A (the base zone) on shipments of six or more pieces to jobbers' stocks, but no freight is allowed on direct shipments. In zone B, freight is equalized with the rate from the zone A boundary on rail shipments of six or more pieces to jobbers' stocks. When boilers are shipped to zone C (the Pacific States), freight is equalized with zone A boundary on carlot rail shipments only.

(f) Uniform delivered prices for all destinations are quoted for two products—insulation board and plumbing materials. Insulation board is sold by most companies on a zone delivered price system. A separate price list is published for each zone, although the carlot prices are the same in all zones for many of the important products, regardless of the plant location. For example, the delivered price to dealers on $\frac{1}{2}$ -inch board, the product studied in this report, is the same Nation-wide, \$33 per thousand square feet in carlots to all destinations. However, it is reported the less-than-carlot prices of this product do vary according to zone or producing plant. Uniform delivered prices (in carlots) throughout the country are achieved by the generally accepted practice of granting full freight allowance.

In the distribution of plumbing fixtures, manufacturers usually establish a list price which applies to plumbers and contractors all over the country. Sales to jobbers and wholesalers are made at a discount off the list—usually 20 percent. Carlot sales are delivered free to customers in important trading areas such as medium-sized or large cities. Customers in outlying areas, however, pay the costs of delivery from the recognized jobbing center. On orders for less than carlot quantities, the manufacturers allow freight at the carlot rate and the buyers pay the difference between the less than carlot and the carlot rate.

(g) *Miscellaneous geographical price structures.*—Limited areas of uniform delivered prices are maintained by the manufacturers of windows and window frames. Like doors, these products are quoted with varying discounts from a nominal list price. Plants are small and more widely distributed than those manufacturing doors. The sales territory of individual plants is usually limited, and sales are made at uniform delivered prices anywhere in this territory.

Brick, sand, gravel, crushed stone, and building tile are sold within narrow markets. These products are produced, for the most part, in small-scale operations. The market areas are limited by high transportation costs and low unit values; moreover, the raw material is widely distributed. Most producers price common brick on an f. o. b. plant basis, with a fixed delivery charge for job-site deliveries. In the larger areas this delivery charge is on a zone basis, but in smaller places the base delivery charge applies anywhere in the area served. Production and market areas for face brick vary but slightly from those for common brick. However, due to the fact that not all clay is suited for face brick and the transportation cost is smaller per unit value, face brick has a wider market range than common brick.

Partition tile also has a much wider selling area than brick. Prices are quoted f. o. b. cars destination or, when shipped by trucks delivered to the job site. In one city, these prices to contractors were \$62.10 per thousand in carlots when delivered to rail siding and \$70.50 per thousand in trucklots when delivered to job site, in the city.

Quantity and Functional Discounts.

Provisions for quantity discounts are frequently included in the marketing arrangements for building materials, particularly in the wholesale market. The amount of the discount is often related to the method of delivery, with distinctions between carlots, less than carlots, and truck shipments. There are two systems for determining quantity discounts for building materials: (1) The use of list prices having fixed differentials between carlot and less than carlot prices and (2) the use of a basic price list with a schedule of quantity reductions progressively greater for each added bracket of units ordered. The system used varies with the item and its marketing structure. Ordinarily, quantity discounts are given on orders for delivery in one shipment, billed to one consignee, for delivery at a single destination, but they may also be based on the total volume of purchases during a stated period.

Discounts may differ not only with the quantity purchased but also with the precise function performed by the buyer. For example, added discounts may be granted to dealers maintaining stocks of a specified size or display rooms. Discounts may also vary between dealers who actually take title to the merchandise and those who act merely as agents. Quantity discounts on roofing vary from 6 percent on less than carlot rail shipments to 14 percent on full carlot rail shipments, with 10-ton trucklot deliveries receiving 10 percent off list. A further discount is given as "wholesalers' compensation" to distributors maintaining stocks of roofing materials and purchasing in carlots.

Quantity discounts may be granted by changes in the list price itself. Thus on carlot orders of insulation board (56,000 square feet), the list price is \$33 (per thousand); on half carlots it is \$34; for lots of 7,000 to 28,000 square feet, \$35; and on less than 7,000 square feet, \$36. In addition to quantity discounts, wholesalers are entitled to additional discounts of \$2 per 1,000 feet where delivery is direct from manufacturer to purchaser, and \$3 per 1,000 feet when delivery is to warehouse stock.

In some industries, practices vary considerably between manufacturers. Thus in the paint industry some companies maintain a complex system based on quantities sold, while others allow a uniform trade discount. The general tendency, especially since the Robinson-

Patman Act of 1936, has been away from quantity-discount plans in favor of a straight functional discount on all purchases.

For example, prior to 1936 one large paint company maintained a profit-sharing scheme of discounts based on volume purchased during 1 year. This scheme was abandoned in December 1936 in favor of quantity discounts based on the size of each order. Until recently, the company granted no discount on orders of 11 gallons or less; on 12 to 35 gallons, inclusive, 5 percent; and on orders of 84 gallons or more, from 5 to 10 percent. In October 1939 the company discontinued this scheme and now quotes any quantity at list less 10 percent.

The discount may depend on the method of packaging. Thus, in the case of white lead, a differential of $\frac{1}{4}$ -cent per pound exists between prices on 100-pound kegs and 50-pound kegs. The differential is applied to each successively smaller package and amounts to $\frac{3}{4}$ -cent per pound on material in $12\frac{1}{2}$ -pound kegs as compared with the price in 100-pound kegs.

In general, no quantity discounts are allowed on plumbing fixtures such as closets, lavatories, sinks, etc. The usual trade discount to jobbers and wholesalers is 20 percent. Some companies, however, do not allow any trade discount or freight on orders of less than six pieces. On range boiler sales some companies allow a trade discount, usually 5 percent, on six or more items, while other companies quote carlot and less than carlot prices, the former being about 5 or 6 percent less than the latter.

Cash Discounts and Terms.

Cash discounts for payment within a set time are allowed on the sale of most building materials at wholesale. By far the most common discount is 2 percent, but discounts have been reported ranging from 1 percent to 5 percent. On certain groups of commodities the discount may be expressed as a fixed amount per unit, instead of a percentage of sales price; for example, on brick and tile it may be quoted as 50 cents or \$1 per 1,000 while for plaster or for sand, gravel, and stone it may be 25 or 50 cents per ton.

While the amount of cash discount is more uniform among companies and products than are many other selling practices, the time within which payment must be made in order to receive the discount varies. The provisions most frequently stated are that payment must be made 10 days after shipment or after delivery; by the 25th of the month on deliveries prior to the 15th; by the 10th proximo for shipments between the 15th and last of the month; or by the 10th proximo. Many companies, as a matter of practice, allow the cash discount for payment within any reasonable time, particularly at retail. In general, prices are net after the discount date and due in either 30 or 60 days. Some companies charge interest on accounts not settled by the due date.

Cash discounts are figured on the net price after deducting freight and other delivery charges and allowances.

Protection Against Price Changes.

The prices of many building materials, such as paint, turpentine, linseed oil, and oak flooring are subject to change without notice, and all purchases are billed at the price in effect the date the order is received. Where price lists are used, as in the case of white lead, the lists are usually issued well ahead of the date on which they are to become effective, thus affording some measure of protection against

price change to the buyer, particularly in the event of an advance in prices.

In the case of a considerable number of building materials, however, specific provision is made to protect buyers against unexpected changes in price. There are several ways in which this may be done. Thus, roofing manufacturers, when announcing a price advance, customarily set a period within which orders will be accepted and shipped at the old price; in the event of a decline unshipped orders on hand and shipments in transit at the time of the reduction (established by date of paid freight bill) are invoiced at the reduced price. On Government bids, in the event of a price rise, contractors are billed at the prices in effect at the time bids were filed, provided the buyer furnishes a certified copy of the Government award and contract.

Plumbing fixtures are sold on a somewhat similar basis. If the price is raised, orders, which are on hand or postmarked to show they were in transit at the time of the change, are accepted at the old price, and wholesalers are allowed 15 days in which to place actual orders for jobs on which they made bids or quoted prices based on the lower price. In the event of a price decline, goods in transit are billed at the lower price.

On millwork, where sales are often contracted for in advance of production, deliveries are made at the price in effect at the time the order was placed in the event of a rise; but at the price in effect at time of delivery if the price has been reduced in the interval.

Marketing practices for numerous other products, such as insulation board, heating boilers, and radiation provide a 30-day period of protection against changes in price.

Other Allowances—Advertising, Etc.

Many large manufacturers of branded or trade-marked building materials provide advertising and other sales promotion plans for their retail dealers. These may take the form of advertising displays, cuts for use in local advertising, display units, booklets, and other promotional material, which is supplied by the manufacturers at little or no cost to the retail dealers. Some manufacturers, such as floor tile and plumbing fixture producers, maintain display rooms in key cities for the use of their retail dealers, while other companies grant extra discounts (15 or 20 percent) on items purchased for display purposes.

Channels of Distribution—Wholesale Markets.⁴

The building materials included in this study are generally distributed from the manufacturer to the contractor or ultimate user through the following channels:

⁴ There are no reliable data available suitable for use in this study on channels of distribution. The Census of Business: 1935 contains a great deal of useful information concerning the distribution of manufacturers' first sales, but because of the Census definitions of "own wholesale branches," "industrial and other large users," and "wholesalers and jobbers," the data contained therein are of little use for the purposes of this study. Thus, the Census definition of the wholesaler includes a dealer who sells to industrial users, and industrial users are defined to include contractors. Therefore, the data showing percentage of sales going to wholesalers and jobbers may include sales going to local distributors who sell both to contractors and to over-the-counter trade and to jobbers who sell only to dealers, and the data showing percentage of sale to industrial and other larger users may include sales to contractors and to industry. The sales to "own wholesale branches" are defined as those which are channeled through company-owned outlets as well as to those where no stocks are carried and which are primarily selling offices acting as headquarters for salesmen. Therefore, if a sale were made to a local lumber yard by a traveling salesman who maintains no local office, that sale would be allocated to the channel "sales to wholesalers and jobbers," whereas if the same sale were made by a salesman who maintained an office it would be classified under "sales to own wholesale branches." The information, therefore, included in the Census of Business: 1935 has a very limited use in a detailed study of the kind undertaken here. The discussion of the channels of distribution in the building-materials industries is based primarily, therefore, on information gained from field contacts and is necessarily very general in scope.

- (a) From manufacturer direct to contractor or industrial user.
- (b) From manufacturer to dealer to contractor.
- (c) From manufacturer to broker or jobber to dealer to contractor.
- (d) From manufacturer to company-owned outlet to contractors and dealers.

(a) Some of the materials included in the study are produced primarily for local consumption and these are generally sold directly from manufacturer to contractor. In some instances, sales are made by dealers for a commission, but the order is delivered directly from the manufacturer to the user without being handled by the dealer. The materials sold in this manner include brick, sand, gravel, crushed stone, ready-mixed concrete, and, in some areas, millwork.

(b) The most typical channel of distribution of the materials included in this study directs the flow of goods from the producer to a local dealer who, in turn, sells to the contractor or ultimate user. In this type of distribution, the dealer assumes all of the handling and credit functions. Commonly the dealer goes by a variety of names. In the plumbing equipment industry, for example, the dealer who performs the intermediate function between manufacturer and contractor generally calls himself a jobber or a wholesaler. In the lumber and miscellaneous materials industry, the dealer is generally housed at a local lumber yard and calls himself either a wholesale or retail dealer. In either case, he makes sales to contractors and, therefore, fits into the "dealer" classification adopted in this study. In the paint industry, the local dealer may be either a lumber yard or a hardware store or a paint store. Materials sold through this channel include lumber and millwork, paint and paint materials, window glass, building tile, insulation board, plaster, roofing, sewer pipe, cement, and lime.

(c) In the lumber industry, sales are frequently made by the producer to brokers or jobbers who buy in large quantities and sell, in turn, to the local dealer. The jobbers generally take title to and handle the material while the brokers perform solely a selling function. In the mill-work industry jobbers frequently buy up material in the Midwest and far West and sell it to dealers throughout the country in competition with local products and nationally advertised brands.

(d) In plumbing and heating, glass, and paints, national manufacturers frequently maintain their own outlets in the larger cities and sell both to other dealers and to contractors, painters, and plumbers. This latter type of distributory channel has become increasingly popular in recent years.

Exclusive Dealerships.

Although they may handle several different materials, a considerable number of building material dealers restrict their sales of each material to the products of one manufacturer. Retail lumber yards, for example, often sell only one brand of cement, lime, roofing, and insulation board. Jobbers and other wholesale distributors of heating boilers and radiation usually sell one make exclusively. Similarly, plumbing fixtures are often sold through exclusive dealers; paint manufacturers sell almost entirely through outlets which distribute one brand of paint. In addition many paint dealers have an agency contract with one or another of the large white lead producers.

Independent Distributors.

While each channel of distribution which has so far been described has its importance, the bulk of building materials is sold through independent dealers, wholesalers, and retailers. Moreover, sales through these independent channels seem to be increasing in many lines. As sales increase and new outlets are needed, these additions are most easily financed by independents.

Channels of Distribution—Retail Markets.

Many of the principal building materials are popularly sold at retail by multiline dealers, the retail lumber yards. In addition to all kinds of lumber and millwork, these concerns often sell lime, cement, roofing, plaster, partition tile, floor tile, sewer pipe, and glass, and frequently take orders for brick, sand, gravel, and stone. Hardware, specialty stores, department stores, and other retail outlets distribute paints and paint materials and glass in the local area. Manufacturers' wholesale stores, independent plumbers, and mail order houses supply plumbing fixtures. Manufacturers' representatives, independent jobbers, and heating contractors distribute heating and range boilers and radiation. The distributors of structural clay products, sand, gravel and stone, deliver from their own or railroad yards, usually in the suburbs of the metropolitan areas, but with offices and agents downtown.

Building materials are usually delivered by the dealers to job site in the metropolitan area without charge. However, in certain large cities zones are established with free delivery in some and a transportation charge in others, particularly, for the more bulky materials such as brick, sand, and gravel.

Quantity discounts, as such, are seldom granted on sales at retail, but special concessions may be made to the customer if his order is for an unusually large quantity. In such cases, a regular customer who purchases a full line of supplies may be charged full price on all products nominally, but granted a discount on the total purchase. On large sales of a single material, the retailer frequently quotes a special contract price.

When cash discounts are granted by retailers, the terms are usually similar to those allowed in the wholesale market. Thus, 2 percent is commonly granted for payment within 10 to 30 days from the date of delivery. In a few cases, a discount of as much as 5 percent was reported.

PRICE LEVELS AND TRENDS

Wholesale Prices.

While there were marked differences between individual commodities, the prices of most of the building materials studied reflected to a greater or lesser extent the general movement of industrial prices during the period 1935 to 1939. Prices both at wholesale and retail showed mixed trends during 1935 and early 1936, rose in late 1936 and 1937, turned downward with the recession of 1937-38, and maintained stability toward the latter part of 1938 and in the first 8 months of 1939. Roofing, lumber, plumbing supplies, heating equipment, linseed oil, white lead, and hydrated lime.

However, many of the individual materials did not participate in this broad trend. Even during the steep rise in the general price level

of 1936-37 the prices of some of the materials moved against the trend. These differences in behavior are shown in the accompanying summary covering the movement in wholesale prices of 34 commodities. (See table 1.)

There was no consistent trend during 1935 and the first part of 1936, the prices of 11 materials remaining relatively stable, 15 revealing a rising trend, and 8, notably the aggregate materials, sewer pipe, lime, and 2 lumber items, declining. During the second phase, the broad advance of late 1936 and early 1937, more than two-thirds of the 34 commodities rose in price, but 7 remained stable, including outside paint, varnish, radiation, and window glass, and 5, such as ready-mixed concrete, floor tile, and inside paint, declined. Sixteen of the 34 commodities participated in the general downswing of 1937-38, notably the paint materials, lumber, and plumbing and heating; but 14 remained stable, characteristically the prepared paints, enamels, and varnishes, and the structural clay products; while 4 actually advanced in price—cement, radiation, crushed stone, and gravel. From July 1938 to September 1939 only 2 materials, crushed stone and ready-mixed concrete, exhibited a falling trend, while 11 rose, including the paint materials, lumber, and some plumbing equipment. The remaining 21 materials remained stable.

TABLE 1.—Summary of trends in wholesale prices of building materials for 4 periods, 1935 to 1939

Item	January 1935 to June 1936			July 1936 to September 1937			October 1937 to June 1938			July 1938 to September 1939		
	Rising trend	Falling trend	Stable	Rising trend	Falling trend	Stable	Rising trend	Falling trend	Stable	Rising trend	Falling trend	Stable
Insulation board.....			X			X			X			X
Plaster.....			X			X			X			X
Asphalt roofing.....	X			X			X					X
Cement.....			X		X		X					X
Hydrated lime.....		X		X			X					X
Outside paint.....			X			X			X			X
Inside paint.....			X		X				X			X
Enamel.....	X			X					X			X
Varnish.....	X					X			X			X
White lead.....	X			X				X		X		
Linseed oil.....	X			X				X		X		
Turpentine.....		X			X			X		X		
Douglas fir.....	X			X				X				X
Oak flooring.....		X		X				X		X		
Southern pine.....			X	X				X		X		
Ponderosa pine.....		X		X				X		X		
Ponderosa pine windows.....	X			X				X				X
Heating boilers.....	X			X				X				X
Radiation.....	X					X	X					X
Range boilers.....			X	X				X				X
Lavatories.....	X			X				X		X		
Bath tubs.....	X			X				X				
Sinks.....	X			X				X		X		X
Common brick ¹			X	X					X	X		
Face brick ¹	X			X					X			X
Building tile.....			X			X			X			X
Floor tile.....	X				X				X			X
Sewer pipe.....		X		X				X		X		
Window glass.....	X					X			X			X
Crushed stone ¹		X		X			X				X	
Gravel ¹		X		X			X					X
Sand ¹		X		X					X	X		
Ready-mixed concrete ¹			X		X				X		X	
Total.....	15	8	10	21	5	7	4	16	13	11	2	20

¹ Retail prices.

The prices of a number of building materials show behavior at marked variance to the trend of commodity prices generally. For example; cement declined in 1936-37 and rose in 1937-38, moving directly against the general trend. Insulation board, plaster, and building tile remained stable during the entire period, while turpentine showed a consistent declining trend.

Table 3 in appendix B summarizes wholesale price movements for 27 of the commodities included in the study. For each product it shows the wholesale index as of January 1935, the dates and levels of the high and low prices reached during the period, and the ratio of the high price to the low.

For the period as a whole, the net movement was generally upward. Of the 25 commodities for which comparative data were available, 13—enamel, varnish, white lead, linseed oil, plumbing and heating equipment, and structural clay products, were higher in September 1939 than in January 1935; 11—roofing, lime, prepared paints, and lumber, were lower; while insulation board remained unchanged. Fifteen out of 27 commodities were at their lowest levels in 1935, 4 in 1936, 1 in 1937, 4 in 1938, and 3 in 1939. Four commodities reached their peak levels in 1935, 2 in 1936, 16 in 1937, 2 in 1938, and 3 in 1939.

The range of prices varied markedly for different commodities. The ratio of the high price to the low for the period was between 1.0 and 1.1 for 7 commodities; between 1.1 and 1.2 for 6 commodities; between 1.2 and 1.3 for 8; and more than 1.3 for the remaining 6. Extreme contrasts in behavior are apparent. The prices of plaster and sewer pipe, for example, remained practically unchanged, while the high price for turpentine was 217 percent of its low.

Retail Prices.

In general the retail prices of each of the building materials studied in this report followed the trend of wholesale prices for the same commodity, particularly in and near major producing areas. However, price fluctuations at retail were typically narrower than at wholesale, and extreme upswings and downswings in the latter market were usually smoothed out in the former. This can be seen by comparing the data in table 4 of appendix B, which presents retail price ranges, with table 3, which shows similar statistics at wholesale. The ratio of high prices to low was substantially narrower at retail than at wholesale for most commodities. For example, the high price of turpentine was 217 percent of its low at wholesale, while this ratio was only 130 percent at retail.

The reason for the greater stability of retail prices probably lies in the nature of local market conditions. When prices are rising the inventories of materials purchased at lower prices act as a check on increases, while on the downswing the presence of high-cost inventories create pressure to resist price cuts. At the same time, dealers' trade organizations in many cities can exercise effective pressure for price stability, particularly in smaller cities where the number of retailers is not great. Furthermore, in the building material field, the "specific job contract" exerts a strong pressure toward price stability. These contracts between the dealer and contractor require the dealer to supply the contractor with all the necessary material for a specific job at contract prices, except that if the "market" price for a commodity drops during the period covering the contract, the buyer will get the

benefit of the lower prices. Hence, when prices advance the dealer must supply a large part of his trade at lower prices previously contracted for, while if prices fall, he must pass on the benefits on sales already made.

As at wholesale, the retail price movements of different materials show considerable contrast. Thus, the retail prices of sand, gravel and stone, cement, lime, plaster, insulation board, paints, and structural clay products changed but little during the period studied, while prices for lumber, plumbing and heating equipment, turpentine, white lead, linseed oil, and roofing moved much more widely, generally reflecting the broad trends of the period which have been described earlier.

Geographical Differentials.

The trends which have been described are, of course, national averages. For some of the materials studied, price trends in the several geographical regions conformed closely with the pattern of these averages; for others regional price trends differed considerably from the national. These comparisons are presented in detail in the analysis of each commodity in the following chapters; space limitations preclude their consideration at this point. However, it is feasible to compare the prices of the different materials in the nine regions during a single month, September 1939. This is done in the following summary which indicates the average rank of all areas at wholesale and at retail for all commodities combined.

Rank (1 represents the lowest prices—9 represents the highest prices)

Region	Wholesale	Retail	Region	Wholesale	Retail
Middle Atlantic.....	1	1	East South Central.....	6	6
East North Central.....	2	2	Pacific.....	7	7
New England.....	3	3	West South Central.....	8	8
South Atlantic.....	4	5	Rocky Mountain.....	9	9
West North Central.....	5	4			

It is evident that prices are generally highest in the Rocky Mountain, Southwest, and Pacific States and lowest in the industrial Northeast. The reasons for these differences are fairly apparent. The Rocky Mountain region in which prices are highest is remote from the major centers of production of most materials, whereas the Northeast is most advantageously situated in this regard.

Tables 2 to 4 summarize these regional differentials for many of the materials which are widely sold.⁵ The wholesale prices of plumbing fixtures and insulation board are uniform Nation-wide; the same is true in the case of retail prices of plumbing fixtures. On all other products, however, the data show distinct regional differences with price levels usually following the general pattern indicated in the above summary.

⁵ In obtaining these ranks, the prices were averaged for the various regions and the regional average then divided by the figure for the Middle Atlantic region (including New York). The resulting relatives were ranked (1 to 9) and the average rank obtained for each region.

TABLE 2.—*Distribution of geographical areas according to ranks,¹ based on relative levels of building material prices in September 1939*

WHOLESALE PRICES

Rank	Regions								Pacific
	New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Rocky Mountain	
1.....	6	16	13	5	8	6	5	5	11
2.....	2	1	3			1		2	
3.....	4	1	1	2	2		1		
4.....	6		2	2	5	1	3		
5.....		1	2	5	4	4			
6.....	1	1		4		6	1	1	
7.....	2	1		3		1	4		3
8.....						1	6	2	5
9.....					1		1	11	2
Average.....	3.1	1.9	1.9	4.2	3.4	4.2	5.3	6.2	4.2
Adjusted.....	3	1	2	5	4	6	8	9	7

RETAIL PRICES

1.....	6	14	6	4	4	6	4	5	6
2.....	3	3	7	3	1			1	1
3.....	8	1	4		3	1			1
4.....			2	4	3	1	1	1	
5.....	2	3		4	4	3	1		
6.....	1		2	4	2	1		2	2
7.....				1		3	7	2	5
8.....				1	1	3	5	1	6
9.....	1				2	1	3	9	
Average.....	2.9	1.8	2.5	4.0	4.3	4.6	6.1	6.4	5.0
Adjusted.....	3	1	2	4	5	6	8	9	7

¹ Number of times each region received the indicated rank in the consideration of prices for 21 building materials (rank 1 represents the lowest prices; rank 9, the highest).

² Comparison provided for only 20 products in these cities.

TABLE 3.—*Geographical differentials in wholesale prices*

[Relatives by regions based on average price in the Middle Atlantic Region as 100.0]

Material	New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Rocky Mountain	Pacific
Insulation board.....	100	100	100	100	100	100	100	100	100
Plaster.....	112	100	136	157	138	172	180	158	169
Roofing.....	103	100	100	104	109	111	110	130	115
Lime, hydrated.....	117	100	104	131	115	122	138	177	163
Paint, outside.....	101	100	100	104	102	103	105	113	100
Paint, inside.....	102	100	100	106	103	105	108	118	100
Enamel.....	101	100	100	103	101	103	104	109	100
Varnish.....	101	100	100	103	101	103	104	109	100
White lead.....	100	100	100	102	102	103	106	110	105
Linseed oil.....	100	100	100	101	99	101	104	105	107
Turpentine.....	103	100	103	106	97	97	103	116	110
Fir, dimension.....	100	100	98	91			93	75	64
Oak flooring.....	102	100	99	100	97	93	95	110	113
Fir doors.....	100	100	95	91	102	96	92	88	82
Boilers, heating.....	102	100	100	109	108	109	120	131	121
Radiation.....	102	100	100	109	109	106	123	134	118
Closets.....	100	100	100	100	100	100	100	100	100
Lavatories.....	100	100	100	100	100	100	100	100	100
Sinks.....	100	100	100	100	100	100	100	100	100
Bathtubs.....	100	100	100	100	100	100	100	100	100
Tile, floor.....	105	100	103	110	105	107	114	128	125

NOTE.—Commodities selected are those which are distributed throughout most regions.

TABLE 4.—*Geographical differentials in retail prices*

[Relatives by regions based on average price in the Middle Atlantic Region as 100.0]

Material	New Eng- land	Middle At- lantic	East North Central	West North Central	South At- lantic	East South Central	West South Central	Rocky Moun- tain	Pacific
Insulation board.....	102	100	102	106	104	107	106	110	109
Plaster.....	127	100	144	162	150	174	185	166	175
Roofing.....	102	100	101	117	108	108	123	146	118
Cement.....	132	100	107	128	125	135	136	155	107
Lime, hydrated.....	138	100	116	138	117	136	153	233	189
White lead.....	100	100	100	101	102	102	105	110	109
Linseed oil.....	103	100	100	102	108	103	112	109	109
Turpentine.....	119	100	117	123	130	145	145	136	138
Oak flooring.....	107	100	101	109	100	85	111	141	115
Fir doors.....	109	100	120	129	118	118	147	121	95
Boilers, heating.....	104	100	103	107	114	115	124	125	120
Radiation.....	106	100	105	113	111	112	123	127	114
Closets.....	100	100	100	100	100	100	100	100	100
Lavatories.....	100	100	100	100	100	100	100	100	100
Sinks.....	100	100	100	100	100	100	100	100	100
Bathtubs.....	100	100	100	100	100	100	100	100	100
Brick, common.....	136	100	103	116	113	96	105	129	115
Sewer pipe.....	100	100	89	98	105	102	108	142	121
Sand.....	68	100	95	71	132	120	114	97	108
Gravel.....	69	100	77	117	139	135	120	60	72
Stone.....	88	100	104	96	140	150	125	82	78

NOTE.—Commodities selected are those which are distributed throughout most regions.

The geographical variations were surprisingly large for many materials, with the regional differences consistently larger in retail markets than at wholesale. For example, comparing the Rocky Mountain States with the North Atlantic area, the largest differentials at wholesale were for hydrated lime (77 percent), plaster (58 percent), and radiation (34 percent). Wholesale prices of plaster averaged 80 percent higher in the West South Central area than in the Middle Atlantic. In the retail market, however, again comparing the Rocky Mountain region with the Middle Atlantic, hydrated lime averaged more than two and one-third times higher, plaster 66 percent, roofing 46 percent, cement 55 percent, and heating boilers and radiation 25 percent higher. As might be expected, the general problem of higher prices in the West does not apply to materials produced principally in that area. Thus the price of fir doors was approximately 25 percent higher in the South Atlantic region than in the producing area. Retail prices of sand, gravel, and crushed stone ran consistently lower in the Rocky Mountain, Pacific, and New England regions than in other parts of the country. Oak flooring prices were lowest in the East South Central region (the principal producing region) and 17 and 20 percent higher, respectively, in the Rocky Mountain and Pacific areas. Retail prices of oak flooring were 57 percent higher in the Rocky Mountain region than in the East South Central area.

Differences Between Wholesale and Retail Prices.

Comparison of wholesale and retail price levels in September 1939 revealed that large differences prevailed in the average distributive mark-ups both between products and between regions.⁶ The sum-

⁶ The typical prices prevailing in the various cities were averaged by regions and for the composite for both wholesale and retail series. The percentage difference, the difference between wholesale and retail prices divided by wholesale prices, has been termed the margin, or mark-up. The data cannot be taken to represent absolute margins. They are based on replacement costs. Moreover, the limited coverage of the prices and the different timing of the fluctuations in wholesale and retail series preclude their use as definite measures of margins. They do, however, indicate a central tendency at a spot date, September 1939.

mary data for 21 building materials are shown on table 5. The regional statistics are presented in the individual chapters.

For the 21 products for which data were available, the differences between wholesale and retail prices ranged from 14 percent (of the wholesale price) for radiation to 81 percent for fir doors and 87 percent for turpentine. In 11 cases this spread varied between the limits of 20 and 30 percent; 6 products fell in the 30 to 50 percent class and a mark-up of 60 percent was recorded for one item.

It is difficult to draw from the data a consistent geographical pattern of these differences between wholesale and retail prices. However, the following observations seem warranted:

1. In general, there was a tendency for larger margins to prevail in areas where retail prices were relatively high.
2. Margins tended to be lowest in the producing areas and highest in the regions farthest from the source of supply.
3. There was a degree of association between the size of the spreads and the relative flexibility of the prices; the larger spreads were noted in the areas where retail prices changed infrequently.

The largest mark-ups were recorded more frequently in the West South Central, Rocky Mountain, and Pacific areas than in other regions. The lowest spreads usually occurred in the Middle Atlantic and East South Central States.

TABLE 5.—Wholesale and retail prices and spreads, September 1939

Item	Unit	Average of typical prices		Difference	
		Wholesale	Retail	Amount	Percent
Insulation board.....	M square feet..	\$33.00	\$46.35	\$13.35	40.5
Plaster.....	Ton.....	13.58	17.57	3.99	29.4
Roofing.....	Square.....	4.58	5.83	1.25	27.3
Cement, portland.....	Barrel.....	2.01	2.67	.66	32.8
Lime, hydrated.....	Ton.....	12.28	19.64	7.36	60.0
White lead.....	Pound.....	.0925	.1125	.0200	21.6
Linseed oil.....	Gallon.....	.7644	.9821	.2177	28.5
Turpentine.....	Gallon.....	.3238	.6058	.2820	87.1
Douglas fir dimension.....	M board feet..	35.91	44.50	8.59	23.9
Oak flooring.....	M board feet..	68.12	87.20	19.08	28.0
Yellow pine boards.....	M board feet..	28.41	36.76	8.35	29.4
Ponderosa pine boards.....	M board feet..	33.48	44.12	10.64	31.8
Douglas fir doors.....	Each.....	1.90	3.43	1.53	80.5
Windows, glazed.....	Each.....	1.53	2.29	.76	49.7
Boilers, heating.....	Each.....	88.67	120.58	31.91	36.0
Radiation.....	Square feet.....	.3020	.3440	.0420	13.9
Boilers, range.....	Each.....	4.68	6.38	1.70	36.3
Closets.....	Each.....	16.48	20.60	4.12	25.0
Lavatories.....	Each.....	11.62	14.53	2.91	25.0
Sinks.....	Each.....	15.04	18.80	3.76	25.0
Bath tubs.....	Each.....	41.28	51.60	10.32	25.0

CHAPTER III

INSULATION BOARD

DESCRIPTION OF THE INDUSTRY

The value of production of wall and insulation board and insulating materials other than gypsum was approximately \$42,000,000 in 1937. Of this total, more than half was the value of rigid insulation board. The production of this item was valued in 1937 at \$22,000,000, as compared to only \$10,000,000 produced in 1931.¹

According to the Census of Manufactures, 114 establishments were engaged in the production of wallboard and plaster (except gypsum), building insulation, and floor composition in 1937. No break-down of the value of product by States is available for this industry. The producers were scattered over 23 States. Important producing States in this industry are Minnesota, Illinois, Indiana, Louisiana, Ohio, New York, and New Jersey.

The production of insulation board is concentrated in the hands of a few companies. According to the Department of Commerce, 82 percent of the value of insulation board produced in 1937 was accounted for by the four largest companies in the industry.

The manufacturers of structural insulation produce a variety of products. Key lap lath, which provides ship lap joints and beveled edges, is frequently used to assure continuous insulation and reinforcement of plaster in joints. Asphalt key lap lath, sheeting, tile, and plank are also important products. The ½-inch thickness has a back surface asphalt treated and finished off with special aluminum coating which provides a vapor barrier. Insulation blocks are plain laminated blocks used under moderate temperature conditions requiring extra thick insulation. Adhesives and moldings, also products of this industry, have popular uses.

The product selected for pricing in this survey was rigid insulation board of ½-inch thickness. This is a dual-surfaced board with one side plain finish, the other side tweed-textured finish.

Channels of Distribution.

Insulation board is sold principally by the manufacturer to local building material distributors who in turn service the dealer. The dealers sell to the contractor and over-the-counter trade.

The specifications established in this study call for prices on sales by manufacturer to retail distributor or dealer in the wholesale market, and in the retail market on sales from dealer to building contractor. According to the trade, a "dealer" means any buyer of structural insulation products at current published dealers' prices, terms,

¹ Census of Manufacturers, 1937, Part I, table 4, p. 871.

and conditions of sale. This is limited to a trade buyer meeting the following specifications:

1. He must be engaged in selling lumber and building materials at retail to contractors, builders, and consumers in his trading area.
2. He must continuously maintain, for the sale and distribution of such products, a plant or plants adequately equipped for service to the public, with office, storage yard, or warehouse kept open regularly during business hours.
3. He must maintain a sales service to contractors, builders, and consumers.
4. He must carry a sufficient stock of such products to supply his share of the normal retail requirements of the community where such facilities are located.

PRICE STRUCTURE

Insulation board is sold by most companies on a zone price system. A separate price list is published for each zone although for many of the important products the carlot prices are the same in all zones regardless of the plant location. For example, the delivered prices to dealers of $\frac{1}{2}$ -inch board, the item under consideration in this study, are the same country-wide, \$33 per thousand to all destinations. However, it is reported that the less-than-carlot prices of this product do vary according to zone or producing plant.

Delivery Practices.

Uniform delivered prices of insulation board throughout the country are achieved by the generally accepted practice of granting full freight allowance on shipments from factories to wholesale and retail distributors. Prices on straight carlot and half-carlot shipments moving by all rail freight are f. o. b. shipping point and delivery is made to customers' own private rail siding on the freight station or public team track nearest destinations, with freight allowed to point of delivery. The seller does not usually assume responsibility for delivery from siding or freight station to the buyer's place of business. Shipments by water transportation are subject to the same limitations. Delivery is made to the steamship dock nearest destination or, where joint water and rail haul is involved, to private rail siding or freight station.

Prices on less than one-half carlot shipments are quoted f. o. b. shipping point, and, if shipped by truck, delivery is made to customer's regularly established warehouse and trucking charges are allowed to point of delivery. If the material is shipped by rail, delivery is made to freight station nearest destination. No allowance is made for freight or cartage on material picked up at the producer's plant or warehouse. Rail freight charges or joint water and rail freight charges on shipments made by the producer are usually paid by the buyer. The customer is reimbursed by the seller upon receipt of the paid freight bill or duplicate.

Wholesale Commissions.

The retail dealer usually purchases from the wholesaler who is eligible for the "wholesale compensation schedule"; that is, for a trade discount. This means that the large distributor is eligible,

based on his purchase of insulation products, for a discount or commission because of his intermediary function. On sales made to dealers or other consumers, where the goods are delivered direct from manufacturer to purchaser, the wholesaler performs the function of commission agent and receives from the producer a \$2 fee per thousand square feet. If the wholesaler purchases additions to his warehouse stock, he receives a \$3 reduction from dealer prices. At the current price of \$33 per thousand square feet of insulation board this discount amounts to about 9 percent.

Quantity and Other Discounts.

Insulation board is sold in varying "price brackets." One large company quotes the following differentials on sales of $\frac{1}{2}$ -inch insulation board in its seaboard zone:

	<i>Per M</i>
Carlot, 56,000 square feet.....	\$33
Half-carlot, 28,000 square feet.....	34
7,000 to 28,000 square feet.....	35
Less than 7,000 square feet.....	36

Prices of other items vary accordingly. For example, in the case of special ivory building board of 1-inch thickness, the spread is from \$50 for carlot quantities to \$57.50 for lots of less than 3,500 square feet; on small size cane tile board 1-inch thickness, the prices for these quantities are \$58 and \$66.50, respectively. The prices of heavy body adhesives vary from \$1.35 per gallon in the 1-gallon can to \$1 per gallon in the 5-gallon can. Moldings generally run 25 cents lower per 100 lineal feet when purchased in carlots than in less than carlot quantities.

"Price brackets" are based on products ordered for delivery in one shipment and billed to one consignee (for delivery at a single destination). The order is usually diversified between the various structural insulation items produced by the seller.

Terms of payment are generally 2 percent discount (after deducting freight) for cash within 20 days from date of invoice, or, net 60 days from date of invoice, or at the buyer's choice, 2 percent 10th proximo, net 30th proximo. The producer requires that receipted freight bills accompany remittance in support of deduction and credit for freight.

Price Guarantees.

It is common practice to guarantee orders against price declines. In the event of a price decrease, all unfilled orders on hand on the effective date of such price decrease are invoiced at the new and lower price. Shipments in transit are also invoiced at the revised price provided evidence is presented in the form of carriers' expense bill showing that shipments were actually in transit and had not been delivered before the price decrease became effective. Inventory adjustments are not allowed.

In the event of a price increase, all unfilled orders on hand prior to the effective date of the increase, including those in transit by mail or telegraph and calling for shipment at mill convenience within 30 days, are invoiced at prices in effect prior to the announcement. However, if the producer's mills are unable to ship the materials within the 30-day period, the orders are billed at the advanced price or canceled. This does not apply to portions of an order omitted from the original shipment because of shortage of stock or mill conditions,

which are invoiced at the same price and on the same terms as if included in the original shipment, provided they are shipped within 30 days after the date of the original shipment.

PRICE LEVELS AND TRENDS

Wholesale Price Levels.

The wholesale price of $\frac{1}{2}$ -inch structural insulation board in carlots does not vary geographically. Full freight is allowed on all shipments and plant prices are the same regardless of location. In September 1939, when this study was started, the price to dealers anywhere in the country was \$33 per thousand square feet.

Wholesale Price Trends.

Examination of the trend of prices from 1935 to date for the various regions indicates that price changes are effective Nation-wide. (See chart I.) The \$33 price continued from January to August 1935; the price dropped to \$31 in September and was effective for 3 months. The low level for the period was \$29, effective for only 2 months, December 1935 and January 1936. In February 1936 the price was raised to \$31. A further increase in April brought the level back to \$33 and there have been no further changes up to the present. There have been only three different prices on this item during the entire 66-month period from 1935 to June 1940. The levels and their duration follow:

	<i>Months</i>
\$29 per M board feet.....	2
\$31 per M board feet.....	5
\$33 per M board feet.....	50

There was no price change in the 42 months from April 1936 through September 1939.

Geographical Variation in Retail Prices.

The levels and trends of retail prices, on sales from dealer to contractor, are not so uniform as is the case in the wholesale market. On the $\frac{1}{2}$ -inch structural insulation board which wholesales at \$33 per thousand, the prices varied at retail from \$38 to \$52.50. (See table 6.) The modal price of \$45 was found in 18 of the 50 cities included in the survey. Although most of the cities in which the \$45 price is typical are located in the East and South, the same price was also quoted frequently in all areas. The variability of retail prices for the country as a whole is shown below:

Typical prices:	<i>Number of cities</i>	Typical prices—Continued.	<i>Number of cities</i>
\$38 to \$38.99.....	1	\$46 to \$46.99.....	5
\$39 to \$39.99.....	—	\$47 to \$47.99.....	3
\$40 to \$40.99.....	1	\$48 to \$48.99.....	4
\$41 to \$41.99.....	—	\$49 to \$49.99.....	3
\$42 to \$42.99.....	3	\$50 to \$50.99.....	7
\$43 to \$43.99.....	—	\$51 to \$51.99.....	—
\$44 to \$44.99.....	—	\$52 to \$52.99.....	1
\$45 to \$45.99.....	18		

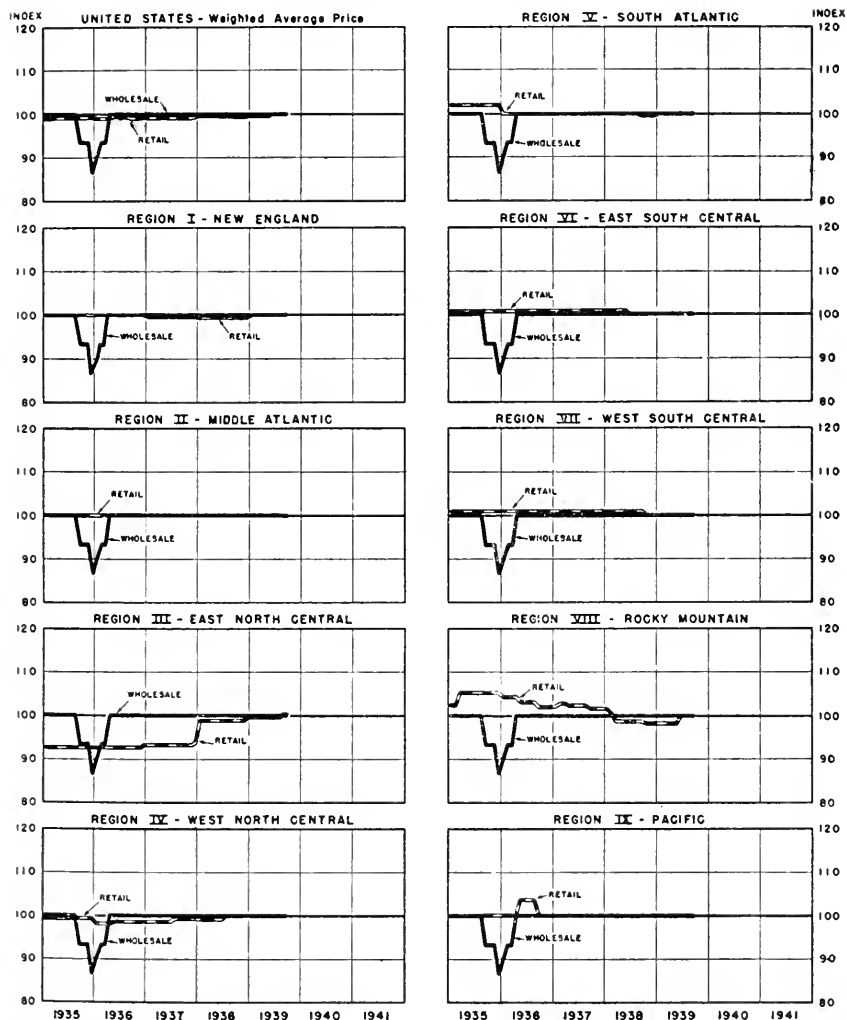
Simple averages of the typical prices for the cities, by geographical areas, are shown below. The highest average prices are in the Mountain, Pacific, and West South Central areas while the lowest levels prevail in the New England, Middle Atlantic, and East North Central

CHART I

INSULATION BOARD

WHOLESALE AND RETAIL PRICE INDEXES

JULY - SEPTEMBER 1939 = 100



Regions. In some of the cities included in the study, building codes do not permit frame construction, and as a consequence sales of sheathing insulation board are very small. This situation occurs in Philadelphia, St. Louis, and Wilmington. Although there was a 38-percent difference between the highest and lowest quotations reported anywhere in the United States, there was only a difference of \$4.22, or 10 percent, between the highest and lowest typical regional prices.

Region	Typical retail prices	
	Range	Average
I. New England.....	\$38.00 to \$48.00.....	\$44.67
II. Middle Atlantic.....	\$42.00 to \$50.00.....	44.00
III. East North Central.....	\$42.00 to \$48.00.....	45.00
IV. West North Central.....	\$38.70 to \$50.00.....	46.46
V. South Atlantic.....	\$40.00 to \$50.00.....	45.94
VI. East South Central.....	\$45.00 to \$50.00.....	47.13
VII. West South Central.....	\$38.00 to \$52.50.....	46.83
VIII. Rocky Mountain.....	\$42.00 to \$55.00.....	48.22
IX. Pacific.....	\$42.50 to \$50.00.....	48.17

It is interesting that in this industry, in which carlot wholesale prices are everywhere uniform, great geographical differences occur in the final retail prices to consumers. Presumably these differences are the result of local distribution costs and market conditions, including variation in consumers' bargaining power and sellers' competition.

It is likely that some of this variation is accounted for by the purchasing power of the distributor. There is a \$3 per thousand feet differential in price between the carlot (56,000 square feet) and the 7,000 square-foot purchase. Buyers in depressed areas probably do not achieve the advantages of quantity purchases.

The geographical differences in the spread between wholesale and retail prices when dealers purchase in carlot quantities depend entirely upon the retail price, for the wholesale level is the same country-wide. The available margin to dealers in an area selling at \$38 retail is 15 percent; the margin increases to 21 percent when the retail price is \$40; to 36 percent with a retail price of \$45 (which is the modal retail price for the United States as a whole), and to 52 percent in areas where the dealers charge \$50 for building board.

As in the case of wholesale prices, retail prices have been extremely rigid in all regions since 1935. This is shown in chart I and tables 7 to 16. However, there are slightly different trends in different areas. In the discussion which follows prices are discussed in terms of relatives, the index numbers having as a base period the third quarter of 1939.

The index of retail prices in the New England area, which had been 100 for 1935 and 1936, dropped to 99.6 in January 1937, a level which held to the end of that year. A further slight decline to 99.4 in January 1938 was also effective for 1 year to January 1939. The index then regained its original level of 100, where it remained to the end of the period.

The index of prices for the Middle Atlantic area did not change from 1935 to the time of this study.

The index number for the East North Central region was 92.5 from January 1935 to November 1936. A slight increase occurred

in December which carried the index to 93.1. In December 1937 it rose to 93.8, and 1 month later, in January 1938, a sharp increase carried the index to 98.9. The upward movement continued in December 1938 to 99.7 and in August 1939 to 100.2.

Prices fluctuated only narrowly in the West North Central region. The index number remained at 99.4 for the year 1935 and in January 1936 declined to 98. There was a slight increase in May 1936 to 98.5 and again in July 1937 to 99.4. Prices moved up slightly in July 1938; since this date the index has been 100.

The indexes fluctuated only fractionally in the South Atlantic, East South Central, West South Central, and Pacific areas. In each of these regions the prices changed only once or twice during the 5-year period under consideration, and then by only 1 or 2 percent.

The index of retail prices in the Rocky Mountain area, contrary to the general trend, changed frequently from 1935 to September 1939, when this survey was begun. The trend was consistently downward from March 1935, with only a small rise in January and February 1937; the index which was 105 in 1935 declined to 98 in May 1939, and rose to 100 in June 1939.

TABLE 6.—*Insulation board*

[Typical wholesale and retail prices for selected cities, September 1939]

Region and city	Prices		Region and city	Prices	
	Whole-sale	Retail		Whole-sale	Retail
REGION I. NEW ENGLAND			REGION V. SOUTH ATLANTIC—CON.		
A. Portland, Maine.....	\$33.00	\$45.00	F. Charlotte, N. C.....	\$33.00	\$45.00
B. Manchester, N. H.....	33.00	40.00	G. Charleston, S. C.....	33.00	42.00
C. Burlington, Vt.....	33.00	45.00	H. Atlanta, Ga.....	33.00	45.50
D. Boston, Mass.....	33.00	45.00	I. Miami, Fla.....	33.00	50.00
E. Providence, R. I.....	33.00	45.00			
F. Hartford, Conn.....	33.00	48.00	REGION VI. EAST SOUTH CENTRAL		
REGION II. MIDDLE ATLANTIC			A. Louisville, Ky.....	33.00	46.00
A. New York, N. Y.....	33.00	41.00	B. Memphis, Tenn.....	33.00	45.00
B. Trenton, N. J.....	33.00	45.00	C. Birmingham, Ala.....	33.00	50.00
C. Philadelphia, Pa.....	33.00	42.00	D. Jackson, Miss.....	33.00	47.50
REGION III. EAST NORTH CENTRAL			REGION VII. WEST SOUTH CENTRAL		
A. Cleveland, Ohio.....	33.00	45.00	A. Little Rock, Ark.....	33.00	45.00
B. Detroit, Mich.....	33.00	48.00	B. Oklahoma City, Okla.....	33.00	45.00
C. Indianapolis, Ind.....	33.00	45.00	C. Austin, Tex.....	33.00	52.50
E. Milwaukee, Wis.....	33.00	42.00	D. Houston, Tex.....	33.00	49.50
REGION IV. WEST NORTH CENTRAL			E. New Orleans, La.....	33.00	46.00
A. Minneapolis, Minn.....	33.00	45.00	REGION VIII. ROCKY MOUNTAIN		
B. Fargo, N. Dak.....	33.00	49.50	A. Butte, Mont.....	33.00	52.25
C. Sioux Falls, S. Dak.....	33.00	50.00	B. Boise, Idaho.....	33.00	50.00
D. Des Moines, Iowa.....	33.00	47.50	C. Cheyenne, Wyo.....	33.00	47.50
E. Omaha, Nebr.....	33.00	38.70	D. Denver, Colo.....	33.00	48.45
F. Wichita, Kans.....	33.00	49.50	E. Salt Lake City, Utah.....	33.00	50.05
G. St. Louis, Mo.....	33.00	45.00	F. Reno, Nev.....	33.00	45.00
REGION V. SOUTH ATLANTIC			G. Phoenix, Ariz.....	33.00	46.00
A. Wilmington, Del.....	33.00	45.00	H. Albuquerque, N. Mex.....	33.00	46.50
B. Baltimore, Md.....	33.00	45.00	REGION IX. PACIFIC		
D. Charleston, W. Va.....	33.00	50.00	A. Seattle, Wash.....	33.00	50.00
E. Richmond, Va.....	33.00	45.00	B. Portland, Oreg.....	33.00	43.00
			C. Los Angeles, Calif.....	33.00	46.50

Specifications: Board, building, insulation, standard ½-inch by 48 inches, standard lengths, per M square feet.

Wholesale: Carlots, manufacturer to retail distributor, f. o. b. cars destination

Retail: Dealer to contractor, delivered to job site, city.

TABLE 7.—*Insulation board*

[Wholesale and retail price indexes—July–September 1939=100.0]

COMPOSITE UNITED STATES AVERAGE

Year and month	Index		Year and month	Index	
	Wholesale	Retail		Wholesale	Retail
1935			1937—Continued		
January.....	100.0	99.2	June.....	100.0	99.1
February.....	100.0	99.2	July.....	100.0	99.1
March.....	100.0	99.3	August.....	100.0	99.1
April.....	100.0	99.3	September.....	100.0	99.1
May.....	100.0	99.3	October.....	100.0	99.1
June.....	100.0	99.3	November.....	100.0	99.1
July.....	100.0	99.3	December.....	100.0	99.2
August.....	100.0	99.3	1938		
September.....	93.3	99.3	January.....	100.0	99.9
October.....	93.3	99.3	February.....	100.0	99.9
November.....	93.3	99.3	March.....	100.0	99.9
December.....	86.7	99.3	April.....	100.0	99.9
1936			May.....	100.0	99.9
January.....	90.0	99.0	June.....	100.0	99.8
February.....	93.3	99.0	July.....	100.0	99.9
March.....	93.3	99.0	August.....	100.0	99.9
April.....	100.0	99.0	September.....	100.0	99.7
May.....	100.0	99.4	October.....	100.0	99.6
June.....	100.0	99.4	November.....	100.0	99.6
July.....	100.0	99.4	December.....	100.0	99.7
August.....	100.0	99.4	1939		
September.....	100.0	99.0	January.....	100.0	99.9
October.....	100.0	99.0	February.....	100.0	99.9
November.....	100.0	99.0	March.....	100.0	99.9
December.....	100.0	99.1	April.....	100.0	99.9
1937			May.....	100.0	99.9
January.....	100.0	99.0	June.....	100.0	100.0
February.....	100.0	99.1	July.....	100.0	100.0
March.....	100.0	99.1	August.....	100.0	100.0
April.....	100.0	99.1	September.....	100.0	100.0
May.....	100.0	99.1			

Specification: Board, building, insulation, standard ½-inch by 48 inches, standard lengths, per M square feet.

Wholesale: Carlots, manufacturer to retail distributor, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 8.—*Insulation board*

[Wholesale and retail price indexes—July–September 1939=100.0]

REGION I. NEW ENGLAND

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	100.0	100.0	June.....	100.0	99.6
February.....	100.0	100.0	July.....	100.0	99.6
March.....	100.0	100.0	August.....	100.0	99.6
April.....	100.0	100.0	September.....	100.0	99.6
May.....	100.0	100.0	October.....	100.0	99.6
June.....	100.0	100.0	November.....	100.0	99.6
July.....	100.0	100.0	December.....	100.0	99.6
August.....	100.0	100.0			
September.....	95.3	100.0	1938		
October.....	93.3	100.0	January.....	100.0	99.4
November.....	93.3	100.0	February.....	100.0	99.4
December.....	86.7	100.0	March.....	100.0	99.4
1936			April.....	100.0	99.4
January.....	90.0	100.0	May.....	100.0	99.4
February.....	93.3	100.0	June.....	100.0	99.4
March.....	93.3	100.0	July.....	100.0	99.4
April.....	100.0	100.0	August.....	100.0	99.4
May.....	100.0	100.0	September.....	100.0	99.4
June.....	100.0	100.0	October.....	100.0	99.4
July.....	100.0	100.0	November.....	100.0	99.4
August.....	100.0	100.0	December.....	100.0	99.4
September.....	100.0	100.0			
October.....	100.0	100.0	1939		
November.....	100.0	100.0	January.....	100.0	100.0
December.....	100.0	100.0	February.....	100.0	100.0
1937			March.....	100.0	100.0
January.....	100.0	99.6	April.....	100.0	100.0
February.....	100.0	99.6	May.....	100.0	100.0
March.....	100.0	99.6	June.....	100.0	100.0
April.....	100.0	99.6	July.....	100.0	100.0
May.....	100.0	99.6	August.....	100.0	100.0
			September.....	100.0	100.0

Specification: Board, building, insulation, standard $\frac{1}{2}$ -inch by 48 inches, standard lengths, per M square feet.

Wholesale: Carlots, manufacturer to retail distributor, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 9.—*Insulation board*
REGION II. MIDDLE ATLANTIC

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	100.0	100.0	June.....	100.0	100.0
February.....	100.0	100.0	July.....	100.0	100.0
March.....	100.0	100.0	August.....	100.0	100.0
April.....	100.0	100.0	September.....	100.0	100.0
May.....	100.0	100.0	October.....	100.0	100.0
June.....	100.0	100.0	November.....	100.0	100.0
July.....	100.0	100.0	December.....	100.0	100.0
August.....	100.0	100.0	1938		
September.....	93.3	100.0	January.....	100.0	100.0
October.....	93.3	100.0	February.....	100.0	100.0
November.....	93.3	100.0	March.....	100.0	100.0
December.....	86.7	100.0	April.....	100.0	100.0
1936			May.....	100.0	100.0
January.....	90.0	100.0	June.....	100.0	100.0
February.....	93.3	100.0	July.....	100.0	100.0
March.....	93.3	100.0	August.....	100.0	100.0
April.....	100.0	100.0	September.....	100.0	100.0
May.....	100.0	100.0	October.....	100.0	100.0
June.....	100.0	100.0	November.....	100.0	100.0
July.....	100.0	100.0	December.....	100.0	100.0
August.....	100.0	100.0	1939		
September.....	100.0	100.0	January.....	100.0	100.0
October.....	100.0	100.0	February.....	100.0	100.0
November.....	100.0	100.0	March.....	100.0	100.0
December.....	100.0	100.0	April.....	100.0	100.0
1937			May.....	100.0	100.0
January.....	100.0	100.0	June.....	100.0	100.0
February.....	100.0	100.0	July.....	100.0	100.0
March.....	100.0	100.0	August.....	100.0	100.0
April.....	100.0	100.0	September.....	100.0	100.0
May.....	100.0	100.0			

Specification: Board, building, insulation, standard ½-inch by 48 inches, standard lengths, per M square feet.

Wholesale: Carlots, manufacturer to retail distributor, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 10.—*Insulation board*

REGION III. EAST NORTH CENTRAL

[Wholesale and retail price indexes July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	100.0	92.5	June.....	100.0	93.1
February.....	100.0	92.5	July.....	100.0	93.1
March.....	100.0	92.5	August.....	100.0	93.1
April.....	100.0	92.5	September.....	100.0	93.1
May.....	100.0	92.5	October.....	100.0	93.1
June.....	100.0	92.5	November.....	100.0	93.1
July.....	100.0	92.5	December.....	100.0	93.8
August.....	100.0	92.5	1938		
September.....	93.3	92.5	January.....	100.0	98.9
October.....	93.3	92.5	February.....	100.0	98.9
November.....	93.3	92.5	March.....	100.0	98.9
December.....	86.7	92.5	April.....	100.0	98.9
1936			May.....	100.0	98.9
January.....	90.0	92.5	June.....	100.0	98.9
February.....	93.3	92.5	July.....	100.0	98.9
March.....	93.3	92.5	August.....	100.0	98.9
April.....	100.0	92.5	September.....	100.0	98.9
May.....	100.0	92.5	October.....	100.0	98.9
June.....	100.0	92.5	November.....	100.0	98.9
July.....	100.0	92.5	December.....	100.0	99.7
August.....	100.0	92.5	1939		
September.....	100.0	92.5	January.....	100.0	99.7
October.....	100.0	92.5	February.....	100.0	99.7
November.....	100.0	92.5	March.....	100.0	99.7
December.....	100.0	93.1	April.....	100.0	99.7
1937			May.....	100.0	99.7
January.....	100.0	93.1	June.....	100.0	99.7
February.....	100.0	93.1	July.....	100.0	99.7
March.....	100.0	93.1	August.....	100.0	100.2
April.....	100.0	93.1	September.....	100.0	100.2
May.....	100.0	93.1			

Specification: Board, building, insulation, standard $\frac{1}{2}$ -inch by 48 inches, standard lengths, per M square feet.

Wholesale: Carlots, manufacturer to retail distributor, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 11.—*Insulation board*

REGION IV—WEST NORTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	100.0	99.4	July.....	100.0	99.4
February.....	100.0	99.4	August.....	100.0	99.4
March.....	100.0	99.4	September.....	100.0	99.4
April.....	100.0	99.4	October.....	100.0	99.4
May.....	100.0	99.4	November.....	100.0	99.4
June.....	100.0	99.4	December.....	100.0	99.4
July.....	100.0	99.4	1938		
August.....	100.0	99.4	January.....	100.0	99.3
September.....	93.3	99.4	February.....	100.0	99.3
October.....	93.3	99.4	March.....	100.0	99.3
November.....	93.3	99.4	April.....	100.0	99.3
December.....	86.7	99.4	May.....	100.0	99.3
1936			June.....	100.0	99.3
January.....	90.0	98.0	July.....	100.0	100.0
February.....	93.3	98.0	August.....	100.0	100.0
March.....	93.3	98.0	September.....	100.0	100.0
April.....	100.0	98.0	October.....	100.0	100.0
May.....	100.0	98.5	November.....	100.0	100.0
June.....	100.0	98.5	December.....	100.0	100.0
July.....	100.0	98.5	1939		
August.....	100.0	98.5	January.....	100.0	100.0
September.....	100.0	98.5	February.....	100.0	100.0
October.....	100.0	98.5	March.....	100.0	100.0
November.....	100.0	98.5	April.....	100.0	100.0
December.....	100.0	98.5	May.....	100.0	100.0
1937			June.....	100.0	100.0
January.....	100.0	98.5	July.....	100.0	100.0
February.....	100.0	98.5	August.....	100.0	100.0
March.....	100.0	98.5	September.....	100.0	100.0
April.....	100.0	98.5			
May.....	100.0	98.5			
June.....	100.0	98.5			

Specification: Board, building insulation, standard $\frac{1}{2}$ -inch by 48 inches, standard lengths, per M square feet.

Wholesale: Carlots, manufacturer to retail distributor, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 12.— *Insulation board*

REGION V—SOUTH ATLANTIC

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	100.0	101.9	July.....	100.0	100.0
February.....	100.0	101.9	August.....	100.0	100.0
March.....	100.0	101.9	September.....	100.0	100.0
April.....	100.0	101.9	October.....	100.0	100.0
May.....	100.0	101.9	November.....	100.0	100.0
June.....	100.0	101.9	December.....	100.0	100.0
July.....	100.0	101.9	1938		
August.....	100.0	101.9	January.....	100.0	100.0
September.....	93.3	101.9	February.....	100.0	100.0
October.....	93.3	101.9	March.....	100.0	100.0
November.....	93.3	101.9	April.....	100.0	100.0
December.....	86.7	101.9	May.....	100.0	100.0
1936			June.....	100.0	100.0
January.....	90.0	100.0	July.....	100.0	100.0
February.....	93.3	100.0	August.....	100.0	100.0
March.....	93.3	100.0	September.....	100.0	98.8
April.....	100.0	100.0	October.....	100.0	98.8
May.....	100.0	100.0	November.....	100.0	98.8
June.....	100.0	100.0	December.....	100.0	98.8
July.....	100.0	100.0	1939		
August.....	100.0	100.0	January.....	100.0	100.0
September.....	100.0	100.0	February.....	100.0	100.0
October.....	100.0	100.0	March.....	100.0	100.0
November.....	100.0	100.0	April.....	100.0	100.0
December.....	100.0	100.0	May.....	100.0	100.0
1937			June.....	100.0	100.0
January.....	100.0	100.0	July.....	100.0	100.0
February.....	100.0	100.0	August.....	100.0	100.0
March.....	100.0	100.0	September.....	100.0	100.0
April.....	100.0	100.0			
May.....	100.0	100.0			
June.....	100.0	100.0			

Specification: Board, building, insulation, standard $\frac{1}{2}$ -inch by 48 inches, standard lengths, per M square feet.

Wholesale: Carlots, manufacturer to retail distributor, f. o. b. cars destination

Retail: Dealer to contractor, delivered to job site, city.

TABLE 13.—*Insulation board*

REGION VI—EAST SOUTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	100.0	100.9	June.....	100.0	100.9
February.....	100.0	100.9	July.....	100.0	100.9
March.....	100.0	100.9	August.....	100.0	100.9
April.....	100.0	100.9	September.....	100.0	100.9
May.....	100.0	100.9	October.....	100.0	100.9
June.....	100.0	100.9	November.....	100.0	100.9
July.....	100.0	100.9	December.....	100.0	100.9
August.....	100.0	100.9	1938		
September.....	93.3	100.9	January.....	100.0	100.9
October.....	93.3	100.9	February.....	100.0	100.9
November.....	93.3	100.9	March.....	100.0	100.9
December.....	86.7	100.9	April.....	100.0	100.9
1936			May.....	100.0	100.9
January.....	90.0	100.9	June.....	100.0	100.0
February.....	93.3	100.9	July.....	100.0	100.0
March.....	93.3	100.9	August.....	100.0	100.0
April.....	100.0	100.9	September.....	100.0	100.0
May.....	100.0	100.9	October.....	100.0	100.0
June.....	100.0	100.9	November.....	100.0	100.0
July.....	100.0	100.9	December.....	100.0	100.0
August.....	100.0	100.9	1939		
September.....	100.0	100.9	January.....	100.0	100.0
October.....	100.0	100.9	February.....	100.0	100.0
November.....	100.0	100.9	March.....	100.0	100.0
December.....	100.0	100.9	April.....	100.0	100.0
1937			May.....	100.0	100.0
January.....	100.0	100.9	June.....	100.0	100.0
February.....	100.0	100.9	July.....	100.0	100.0
March.....	100.0	100.9	August.....	100.0	100.0
April.....	100.0	100.9	September.....	100.0	100.0
May.....	100.0	100.9			

Specification: Board, building insulation, standard $\frac{1}{2}$ -inch by 48 inches, standard lengths, per M square feet.

Wholesale: Carlots, manufacturer to retail distributor, f. c. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 14.—*Insulation board*

REGION VII—WEST SOUTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	100.0	101.0	June.....	100.0	101.0
February.....	100.0	101.0	July.....	100.0	101.0
March.....	100.0	101.0	August.....	100.0	101.0
April.....	100.0	101.0	September.....	100.0	101.0
May.....	100.0	101.0	October.....	100.0	101.0
June.....	100.0	101.0	November.....	100.0	101.0
July.....	100.0	101.0	December.....	100.0	101.0
August.....	100.0	101.0			
September.....	93.3	101.0	1938		
October.....	93.3	101.0	January.....	100.0	101.0
November.....	93.3	101.0	February.....	100.0	101.0
December.....	86.7	101.0	March.....	100.0	101.0
1936			April.....	100.0	101.0
January.....	90.0	101.0	May.....	100.0	101.0
February.....	93.3	101.0	June.....	100.0	101.0
March.....	93.3	101.0	July.....	100.0	101.0
April.....	100.0	101.0	August.....	100.0	101.0
May.....	100.0	101.0	September.....	100.0	101.0
June.....	100.0	101.0	October.....	100.0	100.0
July.....	100.0	101.0	November.....	100.0	100.0
August.....	100.0	101.0	December.....	100.0	100.0
September.....	100.0	101.0			
October.....	100.0	101.0	1939		
November.....	100.0	101.0	January.....	100.0	100.0
December.....	100.0	101.0	February.....	100.0	100.0
1937			March.....	100.0	100.0
January.....	100.0	101.0	April.....	100.0	100.0
February.....	100.0	101.0	May.....	100.0	100.0
March.....	100.0	101.0	June.....	100.0	100.0
April.....	100.0	101.0	July.....	100.0	100.0
May.....	100.0	101.0	August.....	100.0	100.0
			September.....	100.0	100.0

Specifications: Board, building, insulation, standard $\frac{1}{2}$ -inch by 48 inches, standard lengths, per M square feet.

Wholesale: Carlots, manufacturer to retail distributor, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 15.—*Insulation board*
REGION VIII.—ROCKY MOUNTAIN

[Wholesale and retail price indexes—July-September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	100.0	102.4	May.....	100.0	102.2
February.....	100.0	102.4	June.....	100.0	102.2
March.....	100.0	105.2	July.....	100.0	102.2
April.....	100.0	105.2	August.....	100.0	102.2
May.....	100.0	105.2	September.....	100.0	101.5
June.....	100.0	105.2	October.....	100.0	101.5
July.....	100.0	105.2	November.....	100.0	101.5
August.....	100.0	105.2	December.....	100.0	101.5
September.....	93.3	105.2	1938		
October.....	93.3	105.2	January.....	100.0	101.5
November.....	93.3	105.2	February.....	100.0	100.6
December.....	86.7	105.2	March.....	100.0	98.7
1936			April.....	100.0	98.7
January.....	90.0	104.3	May.....	100.0	98.7
February.....	93.3	104.3	June.....	100.0	98.7
March.....	93.3	104.3	July.....	100.0	98.7
April.....	100.0	104.3	August.....	100.0	98.7
May.....	100.0	103.1	September.....	100.0	98.7
June.....	100.0	103.1	October.....	100.0	98.1
July.....	100.0	103.1	November.....	100.0	98.1
August.....	100.0	103.1	December.....	100.0	98.1
September.....	100.0	101.9	1939		
October.....	100.0	101.9	January.....	100.0	98.1
November.....	100.0	101.9	February.....	100.0	98.1
December.....	100.0	101.9	March.....	100.0	98.1
1937			April.....	100.0	98.1
January.....	100.0	102.0	May.....	100.0	98.1
February.....	100.0	102.7	June.....	100.0	100.0
March.....	100.0	102.7	July.....	100.0	100.0
April.....	100.0	102.2	August.....	100.0	100.0
			September.....	100.0	100.0

Specifications: Board, building, insulation, standard ½-inch by 48 inches, standard lengths, per M square feet.

Wholesale: Carlots, manufacturer to retail distributor, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city

TABLE 16.—*Insulation board*

REGION IX.—PACIFIC

[Wholesale and retail price indexes—July-September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	100.0	100.0	June.....	100.0	100.0
February.....	100.0	100.0	July.....	100.0	100.0
March.....	100.0	100.0	August.....	100.0	100.0
April.....	100.0	100.0	September.....	100.0	100.0
May.....	100.0	100.0	October.....	100.0	100.0
June.....	100.0	100.0	November.....	100.0	100.0
July.....	100.0	100.0	December.....	100.0	100.0
August.....	100.0	100.0			
September.....	93.3	100.0	1938		
October.....	93.3	100.0	January.....	100.0	100.0
November.....	93.3	100.0	February.....	100.0	100.0
December.....	86.7	100.0	March.....	100.0	100.0
1936			April.....	100.0	100.0
January.....	90.0	100.0	May.....	100.0	100.0
February.....	93.3	100.0	June.....	100.0	100.0
March.....	93.3	100.0	July.....	100.0	100.0
April.....	100.0	100.0	August.....	100.0	100.0
May.....	100.0	103.6	September.....	100.0	100.0
June.....	100.0	103.6	October.....	100.0	100.0
July.....	100.0	103.6	November.....	100.0	100.0
August.....	100.0	103.6	December.....	100.0	100.0
September.....	100.0	100.0			
October.....	100.0	100.0	1939		
November.....	100.0	100.0	January.....	100.0	100.0
December.....	100.0	100.0	February.....	100.0	100.0
1937			March.....	100.0	100.0
January.....	100.0	100.0	April.....	100.0	100.0
February.....	100.0	100.0	May.....	100.0	100.0
March.....	100.0	100.0	June.....	100.0	100.0
April.....	100.0	100.0	July.....	100.0	100.0
May.....	100.0	100.0	August.....	100.0	100.0
			September.....	100.0	100.0

Specifications: Board, building, insulation, standard $\frac{1}{2}$ -inch by 48 inches, standard lengths, per M square feet.

Wholesale: Carlots, manufacturer to retail distributor, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

CHAPTER IV

PLASTER

DESCRIPTION OF THE INDUSTRY

In 1937 the value of products of the gypsum industry was \$39,000,000. Plaster was the most important product with a value in that year of \$16,500,000, representing 38 percent of the total.¹

Plaster has many specialized uses and hence numerous types are manufactured. Some of the more important types are neat, fibered and unfibered, sanded, molding, prepared finish, and insulating. The greatest demand, however, is for the neat, fibered and unfibered product which is used as basecoat in wall construction. More than 70 percent of the total value of all gypsum plaster produced in 1937 was of the neat type. This product is the one selected for study in this survey. According to members of the industry, its price trend is representative of that for the industry.

Relatively few companies are engaged in the manufacture of plaster. The Department of Commerce reports that in 1937 85 percent of the value of the product was manufactured by the four leading companies. Approximately 20 other companies divide the remainder of the production.

The manufacturing plants are widely scattered over the country. In 1937, active calcining plants were distributed as follows: Eight in New York, five each in Iowa and Michigan, four in Texas, three each in Utah and California, and two each in Colorado, Kansas, Montana, New Jersey, Ohio, Oklahoma, and Virginia. One plant is located in each of 12 other States.²

Three large firms are in an outstanding position in the industry. These firms make, in addition to plaster, other related building materials, wallboard and lath. The manufacturing of the latter two involves the use of patented processes which are owned and controlled by the larger concerns.

PRICE STRUCTURE

Gypsum plaster is generally marketed under a freight equalization system, according to several leading members of the industry. It was impossible in the course of this study to determine whether the practice constituted a basing-point system in any specific locality. Prices at the factory with the addition of freight, determine the delivered price at every destination within the area. There is generally a uniformity of prices at any given destination, regardless of point of origin of the shipment. On shipments from points farther from destination than the controlling factory point for that area the shipper

¹ Bureau of Mines: Minerals Yearbook, 1939, page 1182.

² Source: Minerals Yearbook, 1938, p. 1086.

absorbs the difference in freight costs. Several large cities on the eastern seaboard, however, exceptions to the freight equalization system, are classed as delivered-price areas, where plant prices and an arbitrary average freight rate, based on truck freight, are used in setting the price.

The differences in plant prices are relatively small. In November 1939 the prices at 17 factory points between the Appalachians and the Rockies were either \$10 or \$11 per ton. Points in Ohio and Michigan were lowest for this area, and those from Indiana west were higher. The prices of plaster have changed infrequently in recent years, but delivered prices in most areas have been affected several times by changes in freight rates.

Plaster is usually sold in 100-pound sacks. The manufacturer ordinarily sells in carlots to dealers, delivered at destination. As previously stated, the delivered price is the lowest sum of any applicable plant price plus freight from that point to destination, and is independent of the actual point of origin of shipment. The price to the buyers is quoted per ton, in carlots, f. o. b. cars at the nearest siding to buyer's warehouse. The shipper does not pay the cost of unloading, trucking charges, nor delivery to any job site. Sales are made to any legitimate building-material dealer, who has facilities for storage and is regularly engaged in supplying building materials to contractors or over-the-counter customers.

Channels of Distribution.

Shipments of plaster range from 12 to 40 tons minimum and freight rates generally decrease as the size of shipment is increased. The size of car varies according to the area. The great majority of plaster sales goes from manufacturer or manufacturer's branch office to a building-material dealer who sells both to contractors and to the over-the-counter trade.

Discounts.

The practice of allowing trade discounts, common to many industries, does not apply to the plaster industry. None of the manufacturers interviewed during this survey reported a trade discount. The manufacturers do not sell from a consumer's price list. Prices are quoted to the retail distributor, who sells to the contractor, and to the larger industrial consumer. The price quoted to the dealer is f. o. b. cars, destination, subject to a cash discount if paid within a specified time. This time limit may be 10 days from date of delivery, or, for some companies, by the 10th proximo. The amount of the discount is usually 2 percent, or for certain manufacturers, 25 cents per ton. If the invoice is not paid within the cash discount period, payment of the net amount is usually required within either 30 or 60 days.

Specifications.

The wholesale price of gypsum plaster used in this survey is that from manufacturer to dealer, per ton, in bags, carlots, f. o. b. cars, at destination. The retail price is from dealer to contractor engaged in residential construction, per ton, in bags, delivered to job site, city. The dealer unloads the plaster from the car, provides drayage to his warehouse and storage until resold, and loads and delivers it to the site of construction where it is to be used. The dealer usually

allows a cash discount to the contractor, if paid within 10 days or by the 10th proximo, with net payment in 30 or 60 days.

PRICE LEVELS AND TRENDS

Geographical Differences in Prices and Spreads.

The geographical variations of the wholesale price of plaster are fairly large. This is due to small differences in plant prices and to substantial differences in freight costs. The geographical variations in wholesale delivered prices for plaster follow closely the pattern for other building materials in which transportation costs are an important element of price. During September 1939 the lowest typical delivered price was \$8.50 per ton for New York City, where an "arbitrary" had been established, and the highest was \$17.40 per ton in Albuquerque, N. Mex., and New Orleans, La., with a spread between the two extremes of \$8.90 or about 105 percent of the low price. The average of typical prices of cities, by regions, was lowest for the Middle Atlantic, with \$9.17, and highest for the West South Central, with \$16.48 as the average. The spread between the two regions was \$7.31, or about 80 percent of the low price. Probably the most important factor in the geographical variation is the location of destination in regard to the controlling factory point for that area. The country-wide differences in delivered prices are shown in the following distribution of cities and in chart II. The high degree of relationship between wholesale and retail price levels shown on the chart indicates the extent to which transportation costs are transferred to the consumer.

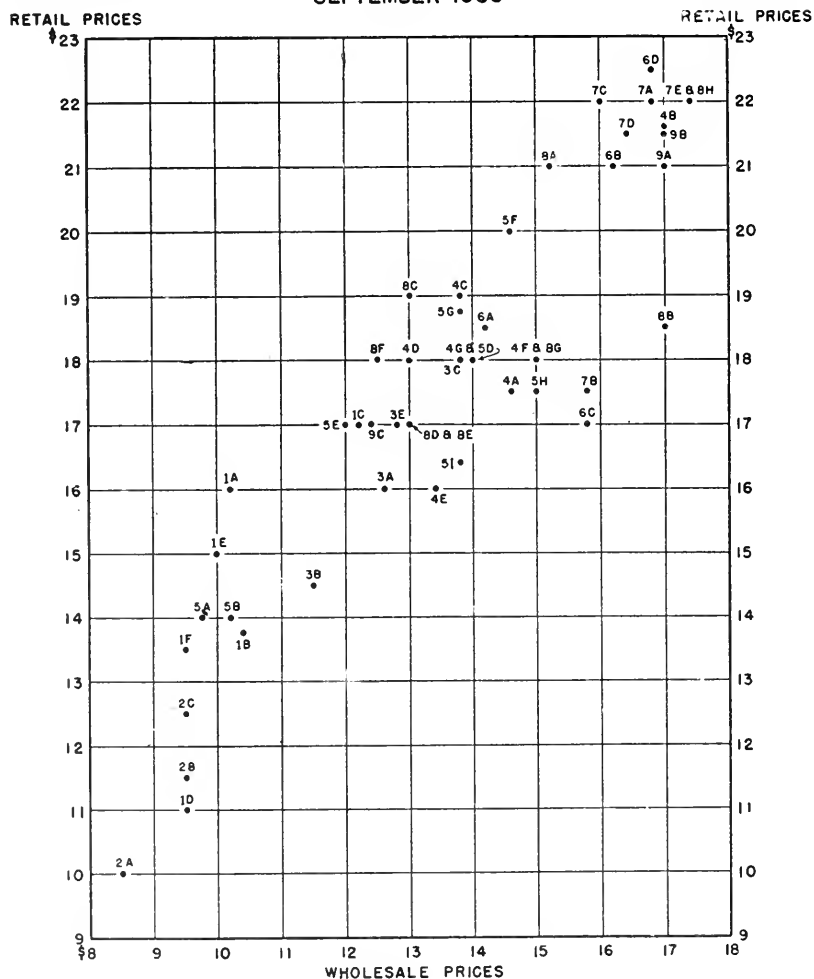
Price	Number of cities		Price	Number of cities	
	Whole-sale	Retail		Whole-sale	Retail
\$8 to \$8.99.....	1	-----	\$16 to \$16.99.....	5	4
\$9 to \$9.99.....	5	-----	\$17 to \$17.99.....	6	10
\$10 to \$10.99.....	4	1	\$18 to \$18.99.....	-----	10
\$11 to \$11.99.....	1	2	\$19 to \$19.99.....	-----	2
\$12 to \$12.99.....	6	1	\$20 to \$20.99.....	-----	1
\$13 to \$13.99.....	9	2	\$21 to \$21.99.....	-----	6
\$14 to \$14.99.....	5	3	\$22 to \$22.99.....	-----	5
\$15 to \$15.99.....	6	1			

(See table 17.)

Retail prices vary in approximately the same geographical pattern as do the wholesale prices. The lowest regional average of typical prices, again, was for the Middle Atlantic area, and the highest was for the West South Central; the respective figures were \$11.33 and \$21. The spread between the two regions was \$9.67, or 85 percent of the low, as compared to \$7.31, or 80 percent, for wholesale. The lowest typical price for a city was \$10 in the Middle Atlantic region, and the highest was \$22.50 per ton for a city in the East South Central area. The spread at retail was \$12.50 from low to high, or 125 percent of the low.

CHART II

PLASTER

WHOLESALE AND RETAIL PRICES FOR SELECTED CITIES
SEPTEMBER 1939

The table below shows the average or typical prices, for cities in each region at wholesale and retail:

Region	Price		Difference	
	Wholesale	Retail	Amount	Percent
I. New England.....	\$10.30	\$14.38	\$4.08	39.6
II. Middle Atlantic.....	9.17	11.33	2.16	23.6
III. East North Central.....	12.49	16.33	3.84	30.7
IV. West North Central.....	14.40	18.30	3.90	27.1
V. South Atlantic.....	12.64	16.95	4.32	34.2
VI. East South Central.....	15.75	19.75	4.00	25.4
VII. West South Central.....	16.48	21.00	4.52	27.4
VIII. Rocky Mountain.....	14.51	18.81	4.30	29.6
IX. Pacific.....	15.47	19.83	4.36	28.2
United States total.....	13.58	17.57	3.99	29.4

The average of wholesale and retail prices of plaster in all the cities surveyed was \$13.58 and \$17.57, respectively. This amounts to a 29.4 percent spread. The differences between wholesale and retail prices show relatively little variation when averaged by geographical areas. The only exception, the small spread for the Middle Atlantic area, may be due to competition in the two very large cities included, with only one medium-sized city. Although similarity of spreads in most regions seems to reflect comparatively uniform costs of merchandising plaster throughout the Nation, actually there is considerable difference in the spreads for the individual cities. For example, while the East South Central area showed an average spread of \$4, the difference between wholesale and retail prices in one city in that region was only \$1.20 per ton, or 8 percent. In contrast, the difference amounted to more than 50 percent in a New England city. However, as shown in the following distribution, the spread ranged between 25 and 40 percent for more than half the cities surveyed.

Difference between wholesale and retail prices in percent	Number of cities	Difference between wholesale and retail prices in percent	Number of cities
0 to 4.9.....	0	30 to 34.9.....	11
5 to 9.9.....	2	35 to 39.9.....	9
10 to 14.9.....	1	40 to 44.9.....	4
15 to 19.9.....	6	45 to 49.9.....	1
20 to 24.9.....	3	50 to 54.9.....	3
25 to 29.9.....	9	55 to 59.9.....	1

Trend of Prices. (See chart III and tables 18 to 27.)

The wholesale price of plaster has remained relatively unchanged for the period since 1935, except in the East South Central area, where prices increased about 5 percent between 1937 and September 1939, and in the Pacific States, where a 5-percent decrease occurred in May, 1938. The fluctuations in the wholesale level were less than 2 percent for all regions except the two noted above.

In general, the level of retail prices followed that of wholesale with relatively small fluctuations as shown by the Bureau's indexes of wholesale and retail prices based on the average in the third quarter of 1939 equals 100.0. In the New England area the retail index declined by a series of small decreases throughout the period from 114 in January 1935 to 100 in September 1939, or about 12 percent.

In the Middle Atlantic and East South Central States the indexes were unchanged at about 108 until 1938 and 1939, when decreases were effective that lowered the level in September 1939 to 94 percent of the base period average for the former and 101 for the latter. The major change in retail prices in the East North Central area occurred in April 1938 when the index increased from 92 to 99. Prices in other regions declined by a series of small changes reaching their lowest levels in 1938.

This analysis of price trends is not complete, since wholesale price records were fragmentary in the New England and Middle Atlantic States, and not wholly complete in the East South Central and West South Central areas.

TABLE 17.—*Plaster*

[Typical wholesale and retail prices for selected cities, September 1939]

Region and city	Prices		Region and city	Prices	
	Whole-sale	Retail		Whole-sale	Retail
REGION I. NEW ENGLAND			REGION V. SOUTH ATLANTIC—COD.		
A. Portland, Maine	\$10.20	\$16.00	F. Charlotte, N. C.	14.60	20.00
B. Manchester, N. H.	10.40	13.75	G. Charleston, S. C.	13.80	18.75
C. Burlington, Vt.	12.20	17.00	H. Atlanta, Ga.	15.00	17.50
D. Boston, Mass.	9.50	11.00	I. Miami, Fla.	13.80	16.40
E. Providence, R. I.	10.00	15.00			
F. Hartford, Conn.	9.50	13.50			
REGION II. MIDDLE ATLANTIC			REGION VI. EAST SOUTH CENTRAL		
A. New York, N. Y.	8.50	10.00	A. Louisville, Ky.	14.20	18.50
B. Trenton, N. J.	9.50	11.50	B. Memphis, Tenn.	16.20	21.00
C. Philadelphia, Pa.	9.50	12.50	C. Birmingham, Ala.	15.80	17.00
			D. Jackson, Miss.	16.80	22.50
REGION III. EAST NORTH CENTRAL			REGION VII. WEST SOUTH CENTRAL		
A. Cleveland, Ohio	12.60	16.00	A. Little Rock, Ark.	16.80	22.00
B. Detroit, Mich.	11.50	14.50	B. Oklahoma City, Okla.	15.80	17.50
C. Indianapolis, Ind.	13.80	18.00	C. Austin, Tex.	16.00	22.00
E. Milwaukee, Wis.	12.80	17.00	D. Houston, Tex.	16.40	21.50
			E. New Orleans, La.	17.40	22.00
REGION IV. WEST NORTH CENTRAL			REGION VIII. ROCKY MOUNTAIN		
A. Minneapolis, Minn.	14.60	17.50	A. Butte, Mont.	15.20	21.00
B. Fargo, N. Dak.	17.00	21.60	B. Boise, Idaho	17.00	18.50
C. Sioux Falls, S. Dak.	13.80	19.00	C. Cheyenne, Wyo.	13.00	19.00
D. Des Moines, Iowa	13.00	18.00	D. Denver, Col.	13.00	17.00
E. Omaha, Nebr.	13.40	16.00	E. Salt Lake City, Utah	13.00	17.00
F. Wichita, Kans.	15.00	18.00	F. Reno, Nev.	12.50	18.00
G. St. Louis, Mo.	14.00	18.00	G. Phoenix, Ariz.	15.00	18.00
			H. Albuquerque, N. Mex.	17.40	22.00
REGION V. SOUTH ATLANTIC			REGION IX. PACIFIC		
A. Wilmington, Del.	9.75	14.00	A. Seattle, Wash.	17.00	21.00
B. Baltimore, Md.	10.20	14.00	B. Portland, Oreg.	17.00	21.50
D. Charleston, W. Va.	14.00	18.00	C. Los Angeles, Calif.	12.40	17.00
E. Richmond, Va.	12.00	17.00			

Specification: Plaster, neat, base coat, gypsum; per ton, in 100-pound paper bags.

Wholesale: Carlots, manufacturer to retail distributor, f. o. b. cars destination.

Retail: Dealer to contractor; delivered to job site, city.

CHART III

PLASTER

WHOLESALE AND RETAIL PRICE INDEXES

JULY - SEPTEMBER 1939 = 100

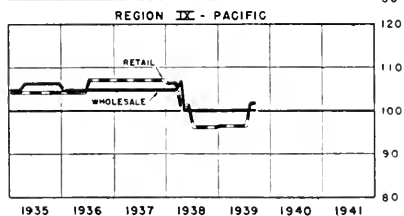
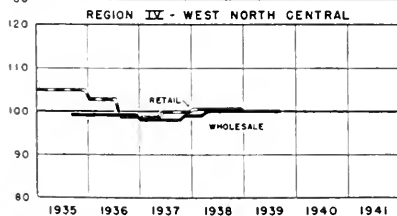
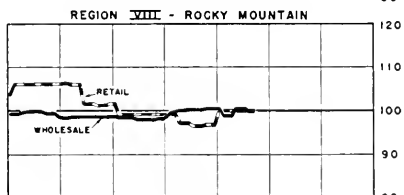
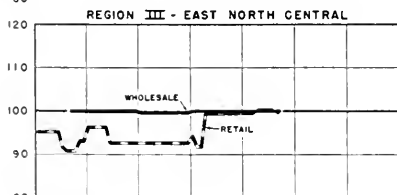
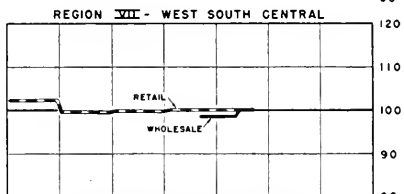
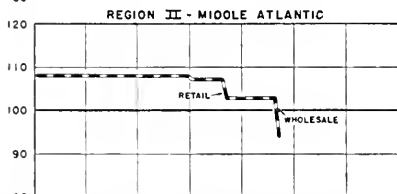
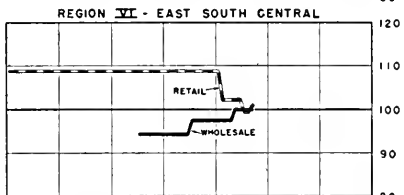
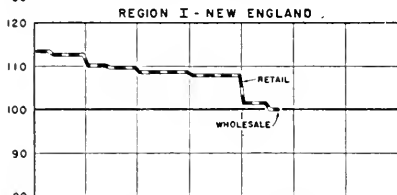
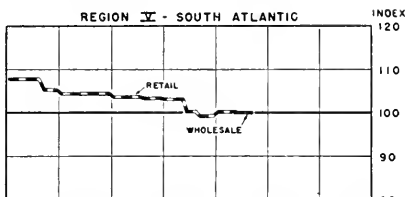
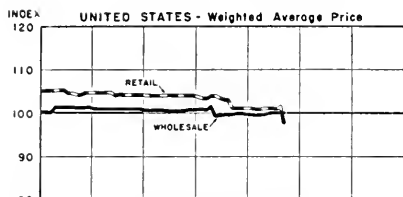


TABLE 18.—*Plaster*

COMPOSITE UNITED STATES AVERAGE

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	100.3	105.2	June.....	100.5	104.1
February.....	100.3	105.3	July.....	100.5	104.1
March.....	100.3	105.3	August.....	100.5	104.0
April.....	101.5	105.3	September.....	100.5	104.0
May.....	101.5	105.3	October.....	100.5	104.0
June.....	101.5	105.3	November.....	100.7	104.0
July.....	101.5	104.8	December.....	100.7	104.0
August.....	101.5	104.6	1938		
September.....	101.4	104.3	January.....	100.8	103.8
October.....	101.4	104.3	February.....	100.9	103.5
November.....	101.4	104.7	March.....	100.7	103.5
December.....	101.4	104.7	April.....	101.6	104.0
1936			May.....	99.4	104.0
January.....	100.9	104.8	June.....	99.4	103.6
February.....	100.9	104.8	July.....	99.6	103.0
March.....	100.9	104.7	August.....	99.6	103.0
April.....	100.9	104.7	September.....	99.7	101.0
May.....	100.9	104.7	October.....	99.8	101.0
June.....	100.9	104.0	November.....	99.8	101.0
July.....	100.9	104.4	December.....	99.7	101.0
August.....	100.9	104.2	1939		
September.....	100.9	104.2	January.....	99.7	101.1
October.....	100.9	104.2	February.....	99.6	100.9
November.....	100.9	104.2	March.....	99.6	100.9
December.....	100.9	104.2	April.....	99.6	101.0
1937			May.....	99.8	101.0
January.....	100.6	104.1	June.....	100.0	101.0
February.....	100.6	104.0	July.....	100.0	100.9
March.....	100.6	104.0	August.....	100.0	101.5
April.....	100.6	104.0	September.....	100.0	97.7
May.....	100.6	104.0			

Specification: Plaster, neat, base coat, gypsum; per ton, in 100-pound paper bags.

Wholesale: Carlots, manufacturer to retail distributor, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 19.—*Plaster*

REGION I. NEW ENGLAND

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....		113.6	June.....		108.7
February.....		113.6	July.....		108.7
March.....		113.6	August.....		108.7
April.....		113.6	September.....		108.7
May.....		112.7	October.....		108.7
June.....		112.7	November.....		108.7
July.....		112.7	December.....		108.7
August.....		112.7	1938		
September.....		112.7	January.....		108.0
October.....		112.7	February.....		108.0
November.....		112.7	March.....		108.0
December.....		112.7	April.....		108.0
1936			May.....		108.0
January.....		110.2	June.....		108.0
February.....		110.2	July.....		108.0
March.....		110.2	August.....		108.0
April.....		110.2	September.....		108.0
May.....		110.2	October.....		108.0
June.....		109.8	November.....		108.0
July.....		109.8	December.....		108.0
August.....		109.8	1939		
September.....		109.8	January.....		101.5
October.....		109.8	February.....		101.5
November.....		109.8	March.....		101.5
December.....		109.8	April.....		101.5
1937			May.....		101.5
January.....		108.7	June.....		101.5
February.....		108.7	July.....		100.0
March.....		108.7	August.....		100.0
April.....		108.7	September.....	100.0	100.0
May.....		108.7			

Specification: Plaster, neat, base coat, gypsum; per ton, in 100-pound paper bags.

Wholesale: In carlots, manufacturer to retail distributor, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 20.—*Plaster*

REGION II. MIDDLE ATLANTIC

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....		108.1	June.....		108.1
February.....		108.1	July.....		108.1
March.....		108.1	August.....		108.1
April.....		108.1	September.....		108.1
May.....		108.1	October.....		108.1
June.....		108.1	November.....		108.1
July.....		108.1	December.....		108.1
August.....		108.1			
September.....		108.1	1938		
October.....		108.1	January.....		107.3
November.....		108.1	February.....		107.3
December.....		108.1	March.....		107.3
1936			April.....		107.3
January.....		108.1	May.....		107.3
February.....		108.1	June.....		107.3
March.....		108.1	July.....		107.3
April.....		108.1	August.....		107.3
May.....		108.1	September.....		102.9
June.....		108.1	October.....		102.9
July.....		108.1	November.....		102.9
August.....		108.1	December.....		102.9
September.....		108.1			
October.....		108.1	1939		
November.....		108.1	January.....		102.9
December.....		108.1	February.....		102.9
1937			March.....		102.9
January.....		108.1	April.....		102.9
February.....		108.1	May.....		102.9
March.....		108.1	June.....		102.9
April.....		108.1	July.....		102.9
May.....		108.1	August.....		102.9
			September.....	100.0	94.2

Specification: Plaster, neat, base coat, gypsum; per ton, in 100-pound paper bags.

Wholesale: In carlots, manufacturer to retail distributor, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 21.—*Plaster*

REGION III. EAST NORTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....		95.3	June.....	99.7	92.7
February.....		95.3	July.....	99.7	92.7
March.....		95.3	August.....	99.7	92.7
April.....		95.3	September.....	99.7	92.7
May.....		95.3	October.....	99.7	92.7
June.....		95.3	November.....	99.7	92.7
July.....		91.7	December.....	99.7	92.7
August.....		90.8	1938		
September.....	100.0	90.8	January.....	100.0	94.4
October.....	100.0	90.8	February.....	100.0	91.8
November.....	100.0	93.2	March.....	100.0	91.8
December.....	100.0	93.2	April.....	100.0	99.6
1936			May.....	100.0	99.6
January.....	100.0	96.5	June.....	100.0	99.6
February.....	100.0	96.5	July.....	100.0	99.6
March.....	100.0	96.5	August.....	100.0	99.6
April.....	100.0	96.5	September.....	100.0	99.6
May.....	100.0	96.5	October.....	100.0	99.6
June.....	100.0	92.7	November.....	100.0	99.6
July.....	100.0	92.7	December.....	100.0	99.6
August.....	100.0	92.7	1939		
September.....	100.0	92.7	January.....	100.0	99.6
October.....	100.0	92.7	February.....	100.0	99.6
November.....	100.0	92.7	March.....	100.0	99.6
December.....	100.0	92.7	April.....	100.0	100.1
1937			May.....	100.0	100.1
January.....	99.7	92.7	June.....	100.0	100.1
February.....	99.7	92.7	July.....	100.0	100.1
March.....	99.7	92.7	August.....	100.0	99.9
April.....	99.7	92.7	September.....	100.0	99.9
May.....	99.7	92.7			

Specification: Plaster, neat, base coat, gypsum; per ton, in 100-pound paper bags.

Wholesale: In carlots, manufacturer to retail distributor, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 22.—*Plaster*

REGION IV. WEST NORTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....		104.9	June.....	98.0	99.8
February.....		104.9	July.....	98.0	99.8
March.....		104.9	August.....	98.0	99.8
April.....		104.9	September.....	98.0	99.8
May.....		104.9	October.....	98.0	99.8
June.....		104.9	November.....	99.0	99.8
July.....		104.9	December.....	99.0	99.8
August.....		104.9			
September.....	99.3	104.9	1938		
October.....	99.3	104.9	January.....	99.0	100.5
November.....	99.3	104.9	February.....	99.0	100.5
December.....	99.3	104.9	March.....	99.1	100.5
1936			April.....	99.9	100.5
January.....	99.3	102.8	May.....	100.0	100.5
February.....	99.3	102.8	June.....	100.0	100.5
March.....	99.3	102.8	July.....	100.0	100.5
April.....	99.3	102.8	August.....	100.0	100.5
May.....	99.3	102.8	September.....	100.0	100.5
June.....	99.3	102.8	October.....	100.0	100.5
July.....	99.3	102.8	November.....	100.0	100.5
August.....	99.3	98.8	December.....	100.0	100.5
September.....	99.3	98.8			
October.....	99.3	98.8	1939		
November.....	99.3	98.8	January.....	100.0	100.0
December.....	99.3	98.8	February.....	100.0	100.0
1937			March.....	100.0	100.0
January.....	98.0	98.8	April.....	100.0	100.0
February.....	98.0	98.8	May.....	100.0	100.0
March.....	98.0	98.8	June.....	100.0	100.0
April.....	98.0	98.8	July.....	100.0	100.0
May.....	98.0	98.8	August.....	100.0	100.0
			September.....	100.0	100.0

Specification: Plaster, neat, base coat, gypsum; per ton, in 100-pound paper bags.

Wholesale: In carlot's, manufacturer to retail distributor, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 23.—*Plaster*

REGION V. SOUTH ATLANTIC

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....		107.8	June.....		103.6
February.....		107.8	July.....		103.6
March.....		107.8	August.....		103.4
April.....		107.8	September.....		103.4
May.....		107.8	October.....		103.4
June.....		107.8	November.....		103.4
July.....		107.8	December.....		103.4
August.....		107.8	1938		
September.....		105.2	January.....		103.1
October.....		105.2	February.....		103.1
November.....		105.2	March.....		103.1
December.....		105.2	April.....		103.1
1936			May.....		103.1
January.....		104.4	June.....		100.2
February.....		104.4	July.....		100.2
March.....		104.4	August.....		100.2
April.....		104.4	September.....		99.2
May.....		104.4	October.....		99.2
June.....		104.4	November.....		99.2
July.....		104.4	December.....		99.2
August.....		104.4	1939		
September.....		104.4	January.....		100.1
October.....		104.4	February.....		100.1
November.....		104.4	March.....		100.1
December.....		104.4	April.....		100.1
1937			May.....	100.0	100.1
January.....		103.6	June.....	100.0	100.0
February.....		103.6	July.....	100.0	100.0
March.....		103.6	August.....	100.0	100.0
April.....		103.6	September.....	100.0	100.0
May.....		103.6			

Specification: Plaster, neat, base coat, gypsum; per ton, in 100-pound paper bags.

Wholesale: In carlots, manufacturer to retail distributor, f. o. b.-cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 24.—*Plaster*

REGION VI. EAST SOUTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....		108.8	June.....		108.8
February.....		108.8	July.....	94.3	108.8
March.....		108.8	August.....	94.3	108.8
April.....		108.8	September.....	94.3	108.8
May.....		108.8	October.....	94.3	108.8
June.....		108.8	November.....	94.3	108.8
July.....		108.8	December.....	94.3	108.8
August.....		108.8			
September.....		108.8	1938		
October.....		108.8	January.....	94.3	108.8
November.....		108.8	February.....	94.3	108.8
December.....		108.8	March.....	94.3	108.8
1936			April.....	94.3	108.8
January.....		108.8	May.....	94.3	108.8
February.....		108.8	June.....	94.3	108.8
March.....		108.8	July.....	97.5	108.8
April.....		108.8	August.....	97.5	108.8
May.....		108.8	September.....	97.5	108.8
June.....		108.8	October.....	97.5	108.8
July.....		108.8	November.....	97.5	108.8
August.....		108.8	December.....	97.5	108.8
September.....		108.8			
October.....		108.8	1939		
November.....		108.8	January.....	97.5	108.8
December.....		108.8	February.....	97.5	102.2
1937			March.....	97.5	102.2
January.....		108.8	April.....	97.5	102.2
February.....		108.8	May.....	100.0	102.2
March.....		108.8	June.....	100.0	102.2
April.....		108.8	July.....	100.0	99.5
May.....		108.8	August.....	100.0	99.5
			September.....	100.0	101.0

Specification: Plaster, neat, base coat, gypsum; per ton, in 100 pound paper bags.

Wholesale: In carlots, manufacturer to retailer distributor, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 25.—*Plaster*

REGION VII. WEST SOUTH CENTRAL

[Wholesale and retail price indexes—July-September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....		102.3	June.....		99.7
February.....		102.3	July.....		99.7
March.....		103.3	August.....		99.7
April.....		102.3	September.....		99.7
May.....		102.3	October.....		99.7
June.....		102.3	November.....		99.7
July.....		102.3	December.....		99.7
August.....		102.3			
September.....		102.3	1938		
October.....		102.3	January.....		99.9
November.....		102.3	February.....		100.0
December.....		102.3	March.....		100.0
			April.....		100.0
1936			May.....		100.0
January.....		99.5	June.....		100.0
February.....		99.5	July.....		100.0
March.....		99.5	August.....		100.0
April.....		99.5	September.....	98.6	100.0
May.....		99.5	October.....	98.6	100.0
June.....		99.5	November.....	98.6	100.0
July.....		99.5	December.....	98.6	100.0
August.....		99.5			
September.....		99.5	1939		
October.....		99.5	January.....	98.6	100.0
November.....		99.5	February.....	98.6	100.0
December.....		99.5	March.....	98.6	100.0
			April.....	98.6	100.0
1937			May.....	98.6	100.0
January.....		99.7	June.....	100.0	100.0
February.....		99.7	July.....	100.0	100.0
March.....		99.7	August.....	100.0	100.0
April.....		99.7	September.....	100.0	100.0
May.....		99.7			

Specification: Plaster, neat, base coat, gypsum; per ton, in 100 pound paper bags.

Wholesale: In carlots, manufacturer to retail distributor, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 26.—*Plaster*

REGION VIII. ROCKY MOUNTAIN

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	99.3	103.8	July.....	98.0	99.2
February.....	99.3	106.1	August.....	98.0	99.2
March.....	99.3	106.1	September.....	98.0	99.2
April.....	99.5	106.1	October.....	98.0	99.2
May.....	99.8	106.1	November.....	98.2	99.2
June.....	99.8	106.1	December.....	98.2	99.2
July.....	99.8	106.1	1938		
August.....	99.8	106.1	January.....	98.7	99.2
September.....	99.3	106.1	February.....	99.5	99.2
October.....	99.3	106.1	March.....	99.8	99.2
November.....	99.3	106.1	April.....	100.0	97.3
December.....	98.7	106.1	May.....	100.0	97.2
1936			June.....	100.1	97.2
January.....	98.4	106.2	July.....	100.1	96.6
February.....	98.4	106.2	August.....	100.1	96.6
March.....	98.6	106.0	September.....	100.1	96.6
April.....	98.6	106.0	October.....	100.4	96.9
May.....	98.6	106.0	November.....	100.4	96.9
June.....	98.6	101.6	December.....	100.4	96.9
July.....	98.6	101.6	1939		
August.....	98.6	101.6	January.....	100.4	100.0
September.....	98.6	101.3	February.....	98.8	100.0
October.....	98.6	101.3	March.....	98.8	100.0
November.....	98.6	101.3	April.....	98.8	100.0
December.....	98.6	101.6	May.....	100.4	100.0
1937			June.....	100.4	100.0
January.....	98.6	101.6	July.....	100.4	100.0
February.....	98.4	99.2	August.....	99.8	100.0
March.....	98.4	99.2	September.....	99.8	100.0
April.....	98.4	99.2			
May.....	98.4	99.2			
June.....	98.0	99.2			

Specification: Plaster, neat, base coat, gypsum; per ton, in 100 pound paper bags.

Wholesale: In carlots, manufacturer to retail distributor, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 27.—*Plaster*

REGION IX. PACIFIC

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	104.9	104.3	July.....	104.9	107.1
February.....	104.9	104.3	August.....	104.9	107.1
March.....	104.9	104.3	September.....	104.9	107.1
April.....	106.3	104.3	October.....	104.9	107.1
May.....	106.3	104.3	November.....	104.9	107.1
June.....	106.3	104.3	December.....	104.9	107.1
July.....	106.3	104.3			
August.....	106.3	104.3	1938		
September.....	106.3	104.3	January.....	104.9	106.4
October.....	106.3	104.3	February.....	104.9	106.4
November.....	106.3	104.3	March.....	104.9	106.4
December.....	106.3	104.3	April.....	106.8	101.3
			May.....	100.0	101.3
1936			June.....	100.0	101.3
January.....	104.9	104.3	July.....	100.0	96.3
February.....	104.9	104.3	August.....	100.0	96.3
March.....	104.9	104.3	September.....	100.0	96.3
April.....	104.9	104.3	October.....	100.0	96.3
May.....	104.9	104.3	November.....	100.0	96.3
June.....	104.9	104.3	December.....	100.0	96.3
July.....	104.9	107.1			
August.....	104.9	107.1	1939		
September.....	104.9	107.1	January.....	100.0	96.6
October.....	104.9	107.1	February.....	100.0	96.6
November.....	104.9	107.1	March.....	100.0	96.6
December.....	104.9	107.1	April.....	100.0	96.6
			May.....	100.0	96.6
1937			June.....	100.0	96.6
January.....	104.9	107.1	July.....	100.0	96.6
February.....	104.9	107.1	August.....	100.0	101.7
March.....	104.9	107.1	September.....	100.0	101.7
April.....	104.9	107.1			
May.....	104.9	107.1			
June.....	104.9	107.1			

Specification: Plaster, neat, base coat, gypsum; per ton, in 100 pound paper bags.

Wholesale: In carlots, manufacturer to retail distributor, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

CHAPTER V

ASPHALT ROOFING

DESCRIPTION AND LOCATION OF THE INDUSTRY

The asphalt shingle and roofing industry includes the manufacturing of asphalt roofing, rolls and shingles, saturated felts, and roof coatings other than paint. The manufacturing processes involve the coating of the base dry felt with asphalt, after which the felt is surfaced with some mineral granule. Both roll roofing and asphalt shingles are made in this manner but shingles are carried through another step and cut either individually or in strips. The shingle is shaped and cut into either the hexagon or square butt type.

Roofing is sometimes patented, depending upon the nature of the process involved and the shape. Some of these patents, many of which cover items of primary importance, are controlled by the Patent and Licensing Corporation; on such patents licensees must secure the permission of and pay royalties to the corporation.

This industry expanded rapidly after the World War. The value of its product increased from \$76,000,000 in 1921 to \$124,000,000 in 1925. Sales were maintained at this level in 1927 but by 1929 the volume, affected by the depression in the construction industry, had declined to \$104,000,000 and by 1933 annual sales amounted to only \$45,000,000.

Shingles are sold both for new construction and for repairs and modernization. Industry representatives estimate that 50 to 60 percent of sales are for replacement and repairs. Consequently, although production of shingles is to some extent a function of the demand for new building construction, the industry has an additional market which protects it against depression troughs in new residential building. However, recovery in housing is clearly reflected in roofing sales; from 1933 to 1937 the value of production increased 130 percent. The value of all asphalt roofing materials produced in 1937 was \$103,000,000, and asphalt roofing of various types comprised more than three-fourths of this total.

The number of plants primarily engaged in producing asphalt roofing decreased from 140 in 1925 to 102 in 1929. There was a heavy mortality during the 1929-33 depression, but from 1933 to 1937 many closed plants reopened and new plants were constructed, and in the latter year the industry reported production from 111 units.

Asphalt roofing materials are produced in 26 States, but production centers in the Great Lakes region. Seven States account for 83 percent of the value of the industry's output and five of these—Illinois, Ohio, Pennsylvania, New York, and Minnesota—bordering on the Lakes, produce 55 percent of the total. Establishments in New Jersey and California manufacture 17 and 11 percent of the total, respectively. Map I and the following table indicate the geographical distribution of the value of production.

TABLE 28.—*Geographical distribution of production, 1937*

State	Value of product	Percent of total	State	Value of product	Percent of total
Illinois.....	\$28, 746, 196	28	New York.....	\$4, 534, 824	4
New Jersey.....	17, 191, 456	17	Minnesota.....	3, 253, 456	3
California.....	11, 401, 618	11	Missouri.....	1, 376, 111	1
Ohio.....	11, 207, 725	11	Other States (18) ¹	15, 465, 180	16
Pennsylvania.....	9, 385, 182	9			

¹ Includes Alabama, Arkansas, Colorado, Connecticut, Georgia, Indiana, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Oregon, Tennessee, Utah, Vermont, Washington, West Virginia, and Wisconsin. Census of Manufactures, 1937, Part I; Roofing, built-up and roll; asphalt shingles; roof coatings other than paint; table 2, p. 1291.

The larger companies generally distribute their products on a Nation-wide basis. Their factories are situated at strategic locations in important consuming centers. According to the Department of Commerce, 42 percent of the total output is produced by the four largest companies.

PRICE STRUCTURE

Classification of Products.

The products of the industry are customarily divided into five groups by the trade. Asphalt shingles and sidings, the manufacture and sale of which are controlled by patents, are grouped under class A. All the nonpatented asphalt shingles, sidings, roll roofing, cap sheet roofings, nails and pyramid kaps comprise class B. Class C products are tarred and asphalt felts, sheathings, slater's felt, and threaded felt. Insulating papers, sheathing papers, and deadening felts are grouped under class D. The last group, class E, comprises the roof coatings and plastic cements.

The product selected for this study is a patented class A item, the 12 by 36 inch, thick butt, strip shingle, which weighs 210 pounds per square. It is a very popular product, representing an important proportion of total sales of shingles. According to the industry, the movement of prices for this item adequately reflects the trends for the industry.

Distribution Policies.

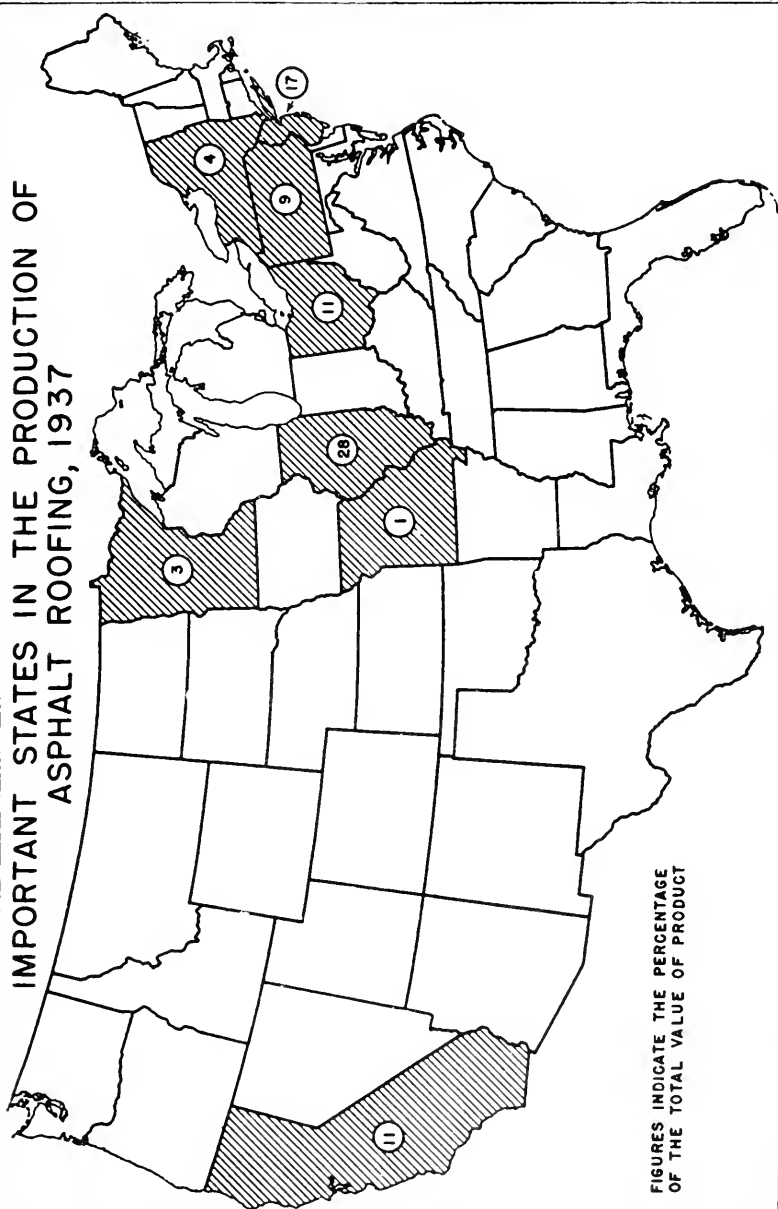
In general the manufacturer accepts orders only from "distributor buyers" who agree to wholesale his products and maintain adequate inventories for that purpose. Inquiries and orders from general consumers such as artisans, carpenters, builders, or general contractors are customarily referred to the distributor. However, the producer sells direct to the Federal Government, to large industrial concerns, and to railroads in any quantity.

*Pricing Practices.*¹

Most manufacturers issue price lists for asphalt roofing materials. These lists stipulate for each product an f. o. b. list price for 2 sets of shipping points in the territory east of the Rocky Mountains; group A points and group B points. These shipping points are, in general, producing centers at which are located one or more manufacturers, although any single manufacturer may have plants only

¹ The following sections down to "Price Levels and Trends" are descriptive of general practices followed by members of the industry and especially the larger companies. They are not necessarily the exact practices of each individual company.

MAP I

IMPORTANT STATES IN THE PRODUCTION OF
ASPHALT ROOFING, 1937FIGURES INDICATE THE PERCENTAGE
OF THE TOTAL VALUE OF PRODUCT

at a limited number of these points. For example, one leading producer lists 8 group A points, all located in the South, and 44 group B points in the Northeast and Middle West. For most class A and B products, prices f. o. b. factory "B" points are lower than at factory "A" points. However, on some class A and B products and on all class C, D, and E products, there is no difference between prices at these two sets of factory points.

Price lists generally delimit "factory point zones" surrounding each of these factory points. No charge is made for delivery within these zones. On sales to points outside these zones, delivered prices are arrived at by adding freight to the price at the factory point zone which is nearest, freight-wise to the destination. In general, each manufacturer will equalize freight to meet the offer of any more advantageously located competitor. For example, one manufacturer announces the following policy in his price lists:

When necessary to meet competition we will equalize freight by invoicing shipments at our published prices f. o. b. any one of our own or competitive factory points which, when our herein stipulated transportation charges from that factory point to destination are added, will result in the lowest cost at destination to the buyer.

Large companies, which operate on a national scale, issue price lists for each major geographical area as established by each company. In general, these divisional price lists differ only in the specific products listed; apparently the sale of certain items is restricted to certain sections of the country.

In addition to the price lists, some of the larger companies publish two merchandising plans, one for the sales area east of the Rocky Mountains and the other for the Pacific region. These merchandising plans present in detail the terms and conditions of sale.

Quantity Discounts.

The actual price for any quantity is derived by applying a schedule of quantity discounts to the quoted list price. However, these discounts and the method of delivery are so closely related that they will be discussed jointly.

Reductions from list are progressive according to quantity and type of delivery. Full box cars of roofing material shipped by rail are invoiced at 14 percent off list. Less than carload shipments by rail are eligible for a discount of only 6 percent. Ten-ton truckload deliveries are quoted at 10 percent off list. This last method of delivery is becoming increasingly popular; according to one prominent manufacturer, more than 60 percent of the production of one of its plants is delivered by company-owned trucks. Less than 10-ton truck deliveries are quoted at the full list price with no discount. A 6 percent discount from the published list price is given on all roofing purchases, regardless of quantity, when picked up by the buyer.

Buyers classed as wholesalers by members of the industry are eligible to receive a special wholesaler's compensation. This is a kind of commission which has the effect of a trade discount to the distributor who maintains stocks of roofing material and purchases in carload quantities. On a square of roofing which wholesales at \$4.15 in factory points the wholesaler's compensation is 27 cents, or 6½ percent.

Delivery.

On shipments within factory point zones referred to above, the manufacturer usually invoices the buyer at the published prices applicable to the zone in which the point of destination is located and absorbs all the transportation charges. In the case of stop-over cars² where all stop-over points and the final destination are within a factory point zone, the stop-over charges are for the buyer's account at any point where less than 20,000 pounds are unloaded.

On shipments to destinations outside of the factory point zones, except in areas where the price has been established by a competitor, the producer usually makes certain allowances on transportation costs. Where goods are shipped in carlots by rail, the manufacturer charges all-rail carlot freight rates less an allowance up to 9 cents per 100 pounds. On carlot shipments by water, or rail and water, the seller, in lieu of allowing up to 9 cents per 100 pounds in the transportation cost, absorbs all switching, wharfage, and transfer charges at the point of shipment or at destination as provided in the tariffs.

When materials are sold in quantities less than a carload, the seller charges the less than carlot rate of freight equalized with competitive factory points. On 10-ton truck shipments in the company's own or hired trucks, the buyer is charged the all-rail carlot rate of freight less up to 9 cents per 100 pounds. The manufacturer frequently refuses to make truck delivery to any point where the difference between the truck rate and the carlot rail rate is excessive. On shipments of less than 20,000 pounds delivered by the company's own or hired trucks, the seller equalizes the published less than carlot rail rate of freight from shipping point to destination with the published less than carlot rate from the factory point controlling price. Transportation costs in excess of the published less than carlot rail rate from shipping point are charged to the buyer. The manufacturer makes no allowance for transportation on pick-ups by customers' trucks at factories or warehouses.

Method of Handling Orders.

Orders are accepted subject to being complete as to specifications, prices, and terms, and for shipment at the convenience of the seller.

Back orders of materials which have been ordered for shipment in part or total at a later date are permitted only from carlot shipments. These orders are shipped at the same price and on the same terms as if included in the original carlot order, except that in the event of an advance in prices, back orders are subject to all provisions relating to price advances the same as any other order.

If prices are increased the company usually reserves the right to establish a period within which it will accept and ship orders at the lower prices in effect immediately prior to the advance. In the case of a price decline, unshipped orders on hand and shipments in transit (as determined by date of the paid freight bill) at the time the reduction becomes effective, are invoiced at the reduced prices.

When trade buyers bid direct to the United States Government, or to contractors for the purpose of enabling them to bid to the Govern-

² A stop-over car is a carload of roofing materials contracted for by the purchaser for delivery at various destinations. This type of shipment obviously involves a greater transportation charge from the origin to the final destination than the straight through shipment between the same two points.

ment, the manufacturer protects them at prices in effect at the time bids were filed, provided the trade buyers furnish a certified copy of the Government award and contract.

Terms of Payment.

Roofing is generally sold on the basis of 2 percent cash 10th proximo, net 30th proximo. The cash discount is allowed from the delivered price when freight is invoiced, or from the net f. o. b. factory price. The seller usually agrees, at his option, to accept trade acceptances with maturity dates averaging not more than 60 days from date of invoice.

PRICE LEVELS AND TRENDS

Commodity Specification.

Consultation with members of the industry and other interested parties indicated that the 12-inch thick butt strip shingle was a popular product whose price trend would be reasonably representative of many roofing materials. Accordingly, the following price analysis relates to this item only.

Geographical Variation in Prices and Spreads.

In contrast to the uniform prices of insulation board, the delivered wholesale prices of asphalt shingles vary widely from one part of the country to the other, depending partly upon whether the group A or group B prices are applicable and partly upon the cost of shipping from the nearest "factory point." The manufacturers' price to distributors varied from \$4.15 per square in eastern factory point zones to \$6.12 per square in Albuquerque, N. Mex., which is remote from any factory point. Twelve of the fifty cities were factory points or were close enough to such point so that the price of this item was at or about \$4.15. The wholesale price was \$4.50 or lower in 31 cities; it exceeded \$5 per square in only 8 cities. The number of cities reporting prices within each range follows:

Wholesale price	Number of cities	Wholesale price	Number of cities
\$4.00 to \$4.24.....	14	\$5.00 to \$5.24.....	3
\$4.25 to \$4.49.....	17	\$5.25 to \$5.49.....	1
\$4.50 to \$4.74.....	3	\$5.50 to \$5.74.....	3
\$4.75 to \$4.99.....	8	\$5.75 and over.....	1

The highest prices were found in the Rocky Mountain area and the lowest in the eastern and midwestern regions, where more factories are located, shipping distances are shorter, and orders typically larger.

As was to be expected, the geographical variation in retail roofing prices was greater than in the case of wholesale prices. The largest differential in wholesale prices was \$4.15 to \$6.12, a percentage difference of 47 percent. The range of retail prices was much greater. The typical price to contractors was \$4.45 per square in St. Louis, Mo., and \$9.26 in Butte, Mont., a spread of 108 percent. In general the lower prices were in the factory cities and the higher levels in the cities located farthest from the source of supply. The distribution, according to a number of cities, follows:

Retail prices	Number of cities	Retail prices	Number of cities
\$4.25 to \$4.49.....	1	\$6.25 to \$6.49.....	2
\$4.50 to \$4.74.....	3	\$6.50 to \$6.74.....	5
\$4.75 to \$4.99.....	4	\$6.75 to \$6.99.....	0
\$5.00 to \$5.24.....	9	\$7.00 to \$7.24.....	6
\$5.25 to \$5.49.....	5	\$7.25 to \$7.49.....	0
\$5.50 to \$5.74.....	6	\$7.50 to \$7.74.....	2
\$5.75 to \$5.99.....	4	\$8.00.....	1
\$6.00 to \$6.24.....	0	\$9.25.....	1

As in the case of wholesale prices, the retail prices were highest in the Rocky Mountain region and lowest in eastern cities where most of the factories are located. The average regional differentials are shown below:

Region	Prices		Difference	
	Retail	Wholesale	Amount	Percent
I. New England.....	\$5.15	\$4.28	\$0.87	20.3
II. Middle Atlantic.....	5.05	4.17	.88	21.1
III. East North Central.....	5.11	4.19	.92	22.0
IV. West North Central.....	5.90	4.35	1.55	35.6
V. South Atlantic.....	5.44	4.53	.91	20.0
VI. East South Central.....	5.46	4.61	.85	18.4
VII. West South Central.....	6.22	4.58	1.64	35.8
VIII. Rocky Mountain.....	7.37	5.42	1.95	36.0
IX. Pacific.....	5.98	4.79	1.19	24.8
United States total.....	5.83	4.58	1.25	27.3

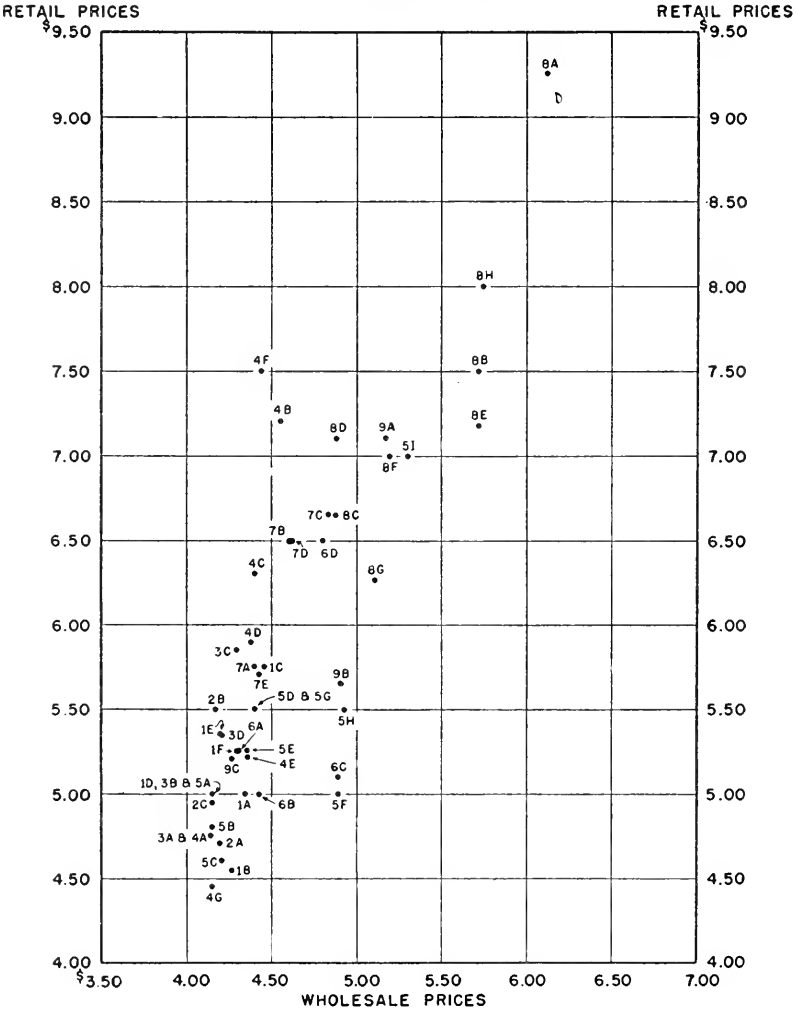
The spread³ between wholesale and retail prices varies greatly throughout the country. The average difference for all the cities included in the survey was 27.3 percent, but this figure is not uniformly representative of all regions. The percentages ranged all the way from 2 percent in Charlotte, N. C., and 4 percent in Birmingham, Ala., to 69 percent in Wichita, Kans., 58.2 percent in Fargo, N. Dak., and 51.3 percent in Butte, Mont. The spreads were generally higher in the West South Central and the Rocky Mountain regions. The percentage distribution of the margins below shows the wide variation:

Percent margin	Cities	Percent margin	Cities
0 to 9.9.....	5	40 to 49.9.....	4
10 to 19.9.....	10	50 to 59.9.....	2
20 to 29.9.....	15	60 and over.....	1
30 to 39.9.....	12		

Chart IV and table 29 illustrate the wide differences in retail and wholesale prices in various areas and the differences between them at various price levels. Most of the manufacturers' prices were between \$4 and \$4.50 while the retail prices for the cities within this group went as low as \$4.50 and as high as \$7.50. However, the tendency for higher retail prices to accompany the higher wholesale prices is very evident.

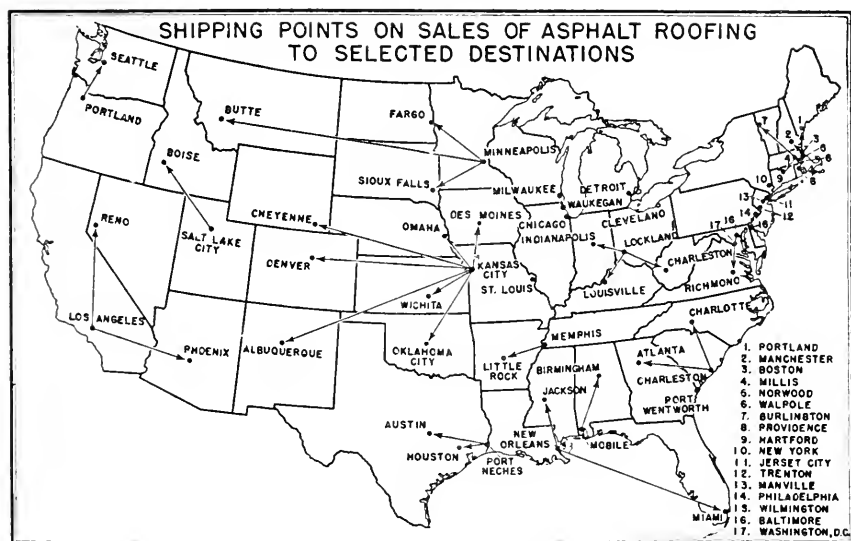
³ The "wholesaler's compensation," a special commission to certain large distributors, was not considered in computing the data on spreads.

CHART IV
ASPHALT STRIP SHINGLE ROOFING
WHOLESALE AND RETAIL PRICES FOR SELECTED CITIES
SEPTEMBER 1939



In general, the cities which lie farthest from the plant, have the highest wholesale price levels; this is, of course, indicative of the effect of transportation costs. For example, consider the prices in two cities, Minneapolis, Minn., and Butte, Mont. The first is a factory city where the price to distributors is \$4.15 per square. Roofing sold in Butte comes from Minneapolis and in carlot quantities it costs \$1.87 per square to ship it that distance. Hence, the wholesale price in Butte is \$6.12 or more than 47 percent above the price at the factory. Similarly, the wholesale delivered price at Miami, Fla., is \$5.29 per square while in the controlling factory city, New Orleans, La., the price is only \$4.43, a difference of 86 cents. All-rail freight from New Orleans to Miami is 95 cents. Table 40 shows the freight rates from the nearest factory point and map II shows the shipping point to each of the cities included in the survey. The

MAP II



location of plant obviously is a major factor in the wholesale delivered prices at the various destinations.

Competitive conditions in a city are an important factor in determining retail price levels. Where competition between retailers is active, margins are usually moderate or low. On the other hand, where competition is not so vigorous, margins tend to run higher.

Certain dealers claim that they are forced to meet the prices quoted by manufacturers' representatives who sell direct to contractors as cheaply as they sell to jobbers in less than carload quantities. This, of course, results in low margins and retail prices.

Other dealers handle roofing only as a service function, expecting to make little, if any, profit. In these cases, roofing is used as a "leader" for sales of lumber and other materials. Hence prices are low and the margin negligible, and profit is made on other items.

Competition from substitutes is important in this industry in certain parts of the country. In the lumber areas, cedar and cypress shingles

are sold on a large scale and frequently asphalt shingle prices are forced down thereby. Slate roofing is a factor only in the case of higher priced dwellings.

In certain "depressed" areas, where construction activity and sales of building materials are not large, dealers claim that high prices and a high working margin are needed in order to maintain a reasonable income. In these places, not only roofing but all types of materials are high in price compared to the rest of the country, with the result that construction activity may be further discouraged.

Price Trends—Wholesale Markets (See chart V and tables 30 to 39).

The trend of wholesale prices from 1935 to date was very similar in all regions except in the Pacific area. Although several manufacturers have national distribution for their products, sales in States east of the Rocky Mountains are governed by one merchandising plan and in the far western States by another. The different price pattern prevailing in the Far West is in part the result of this separate merchandising structure.

In the eastern regions, wholesale prices declined late in 1935 but increased rapidly in the early months of 1936. The higher level was maintained throughout 1936 and most of 1937. In the fall of 1937, however, about the time other durable goods prices began to drop off, roofing prices started to decline and by the middle of 1938, had fallen about 30 to 40 percent. With the exception of a slight increase in 1939, this level was maintained.

After a sharp increase in March of 1935 the curve of wholesale prices in the Pacific area was stable throughout the remainder of the year. The trend was downward throughout most of 1936, when the level declined by 24 percent. The index leveled off in the winter of that year before beginning the sharp upward spiral which continued during the first 8 months of 1937, reaching a point in October which was 75 percent of the 1935 level. There was no change until February 1939, when the trend again turned downward, declining 16 percent to September 1939.

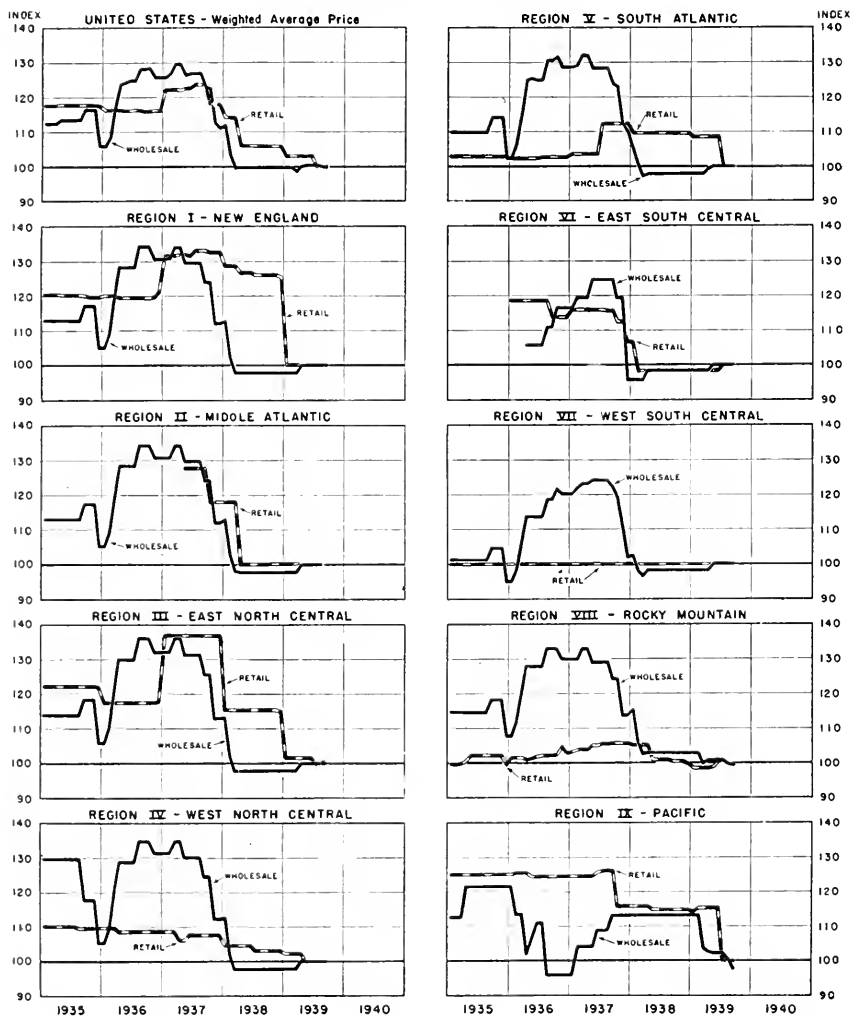
Price Trends—Retail Markets. (See chart V and tables 30 to 39.)

The trend of retail prices varied considerably from one region to another. With the exception of three regions, West North Central, West South Central, and Rocky Mountain, retail prices generally followed the wholesale price movement but with a considerable lag. This condition can be accounted for in part by the accumulation of inventories in dealers' hands, a condition which frequently occurs in this industry. The rapid market changes which occurred during the period under consideration, recovery in 1936 and early 1937 and recession in 1938, were apparently conducive to accumulation of larger than normal stocks. The unusual price trends for roofing sold in the three regions mentioned probably can be traced in part to the competition of substitute materials, particularly cedar shingles.

Prices for the New England region changed only slightly from 1935 to December 1936. By February 1937, however, the level had moved upward 10 percent and there was another small increase in the summer of 1937. A decline started in October of that year, but the drop was slow throughout 1938. Between December 1938 and January 1939, however, the index fell 20 percent. This reduction reflected

CHART V

ASPHALT STRIP SHINGLE ROOFING WHOLESALE AND RETAIL PRICE INDEXES JULY - SEPTEMBER 1939 = 100



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the downswing in the wholesale prices which occurred in 1937 and early 1938. Prices did not change in 1939.

The retail price index in the Middle Atlantic region declined rapidly in the last half of 1937 and the first few months of 1938, when a 21 percent reduction occurred. This parallels in timing the movement of wholesale prices during the period. There was no change in the level of prices from April 1938 to date.

The curve of retail prices for the East North Central region shows a very peculiar trend. While it generally followed the movement of wholesale prices it changed only once a year except during 1939. No fluctuation occurred within each year; prices moved up or down in January and remained stable for the 12-month period. Average prices for the leading cities in the area moved down 3 percent in January 1936, up 18 percent in 1937, down 16 percent in 1938 and again down 14 percent in 1939.

Retail prices in the South Atlantic area were also quite stable. There was only a slight change upward in the 2½ years from January 1935 to June 1937. In July, however, an increase of 9 percent occurred. Three small reductions lowered the level during the next two years. A break of 5 percent was recorded in June 1939.

There have been only two major movements in the retail index for the East South Central region. A decline of 3 percent occurred in August 1936 and a sharp reduction of 16 percent in the first half of 1938. The level was then stable until June 1939 when a slight increase was noted.

The price index for the Pacific area showed practically no change from January 1935 to the middle of 1937. A 6 percent reduction was effective in October and this new level was maintained until July 1939. The index then dropped 14 percent, paralleling the trend of wholesale prices for the region.

As stated above, the retail price curves for the West North Central, West South Central, and Rocky Mountain areas showed little or no similarity to the price trends for the other regions, or to the wholesale price movements. Regardless of the fluctuations in wholesalers' cost, the contractor's price (the retail price) remained relatively stable. In the discussion of margins, it was indicated that the same three regions were "out of line" on the differences between wholesale and retail prices. (See p. 71.) The average spread was more than 35 percent in each region. In the other areas, the spread approximated 20 percent.

This means, of course, that the extremely high spreads which existed when this study was made were, undoubtedly, much lower during most of the period from 1935 to September 1939. Wholesale prices generally were higher during this period than they were in the fall of 1939; hence, the working margin was not as great. It seems likely, however, that the level of prices set by the dealers in these regions was high enough to afford an adequate margin even if the wholesalers' prices were increased. There is relatively little asphalt roofing material used because of the competition of wooden shingles produced in the area. The retailers accumulate inventories which remain on the shelves for long periods of time, reducing the occasion for price changes in the retail series.

TABLE 29.—*Asphalt strip shingle roofing*

[Typical wholesale and retail prices for selected cities, September 1939]

Region and city	Prices		Region and city	Prices	
	Whole-sale	Retail		Whole-sale	Retail
REGION I. NEW ENGLAND			REGION V. SOUTH ATLANTIC—CON.		
A. Portland, Maine.....	\$4.34	\$5.00	E. Richmond, Va.....	\$4.36	\$5.25
B. Manchester, N. H.....	4.27	4.54	F. Charlotte, N. C.....	4.89	5.00
C. Burlington, Vt.....	4.46	5.75	G. Charleston, S. C.....	4.40	5.50
D. Boston, Mass.....	4.15	5.00	H. Atlanta, Ga.....	4.93	5.50
E. Providence, R. I.....	4.19	5.35	I. Miami, Fla.....	5.29	7.00
F. Hartford, Conn.....	4.29	5.25			
REGION II. MIDDLE ATLANTIC			REGION VI. EAST SOUTH CENTRAL		
A. New York, N. Y.....	4.19	4.71	A. Louisville, Ky.....	4.31	5.25
B. Trenton, N. J.....	4.17	5.50	B. Memphis, Tenn.....	4.43	5.00
C. Philadelphia, Pa.....	4.15	4.95	C. Birmingham, Ala.....	4.89	5.10
			D. Jackson, Miss.....	4.80	6.50
REGION III. EAST NORTH CENTRAL			REGION VII. WEST SOUTH CENTRAL		
A. Cleveland, Ohio.....	4.15	4.75	A. Little Rock, Ark.....	4.40	5.75
B. Detroit, Mich.....	4.15	5.00	B. Oklahoma City, Okla.....	4.61	6.50
C. Indianapolis, Ind.....	4.29	5.85	C. Austin, Tex.....	4.83	6.65
E. Milwaukee, Wis.....	4.21	5.34	D. Houston, Tex.....	4.62	6.50
			E. New Orleans, La.....	4.43	5.70
REGION IV. WEST NORTH CENTRAL			REGION VIII. ROCKY MOUNTAIN		
A. Minneapolis, Minn.....	4.15	4.75	A. Butte, Mont.....	6.12	9.26
B. Fargo, N. Dak.....	4.55	7.20	B. Boise, Idaho.....	5.72	7.50
C. Sioux Falls, S. Dak.....	4.40	6.30	C. Cheyenne, Wyo.....	4.88	6.65
D. Des Moines, Iowa.....	4.38	5.90	D. Denver, Colo.....	4.88	7.10
E. Omaha, Nebr.....	4.36	5.22	E. Salt Lake City, Utah.....	5.72	7.18
F. Wichita, Kans.....	4.44	7.50	F. Reno, Nev.....	5.19	7.00
G. St. Louis, Mo.....	4.15	4.45	G. Phoenix, Ariz.....	5.11	6.27
			H. Albuquerque, N. Mex.....	5.74	8.00
REGION V. SOUTH ATLANTIC			REGION IX. PACIFIC		
A. Wilmington, Del.....	4.15	5.00	A. Seattle, Wash.....	5.17	7.10
B. Baltimore, Md.....	4.15	4.80	B. Portland, Oreg.....	4.92	5.65
C. Washington, D. C.....	4.21	4.60	C. Los Angeles, Calif.....	4.27	5.20
D. Charleston, W. Va.....	4.40	5.50			

Specification: Roofing, asphalt strip shingles, square butt, 3-in-1 strip, approximately 210 pounds per square, per square.

Wholesale: In carlots, manufacturer to retail distributor, f.o.b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 30.—*Asphalt strip shingle roofing*

COMPOSITE UNITED STATES AVERAGE

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	112.3	117.6	June.....	127.0	122.6
February.....	112.3	117.6	July.....	127.0	123.8
March.....	112.3	117.6	August.....	127.0	123.8
April.....	113.3	117.7	September.....	122.9	123.8
May.....	113.3	117.7	October.....	122.6	118.2
June.....	113.3	117.7	November.....	112.5	118.2
July.....	113.3	117.7	December.....	111.1	118.0
August.....	113.3	117.7	1938		
September.....	116.4	117.7	January.....	111.9	114.3
October.....	116.4	117.7	February.....	103.1	114.1
November.....	116.4	117.7	March.....	99.6	114.1
December.....	105.9	117.4	April.....	99.7	106.1
1936			May.....	99.7	105.9
January.....	105.9	116.2	June.....	99.7	105.9
February.....	108.6	116.3	July.....	99.7	105.8
March.....	117.3	116.3	August.....	99.7	105.8
April.....	123.7	116.2	September.....	99.7	105.8
May.....	124.3	116.0	October.....	99.7	105.8
June.....	124.8	116.0	November.....	99.7	105.8
July.....	124.8	116.2	December.....	99.7	105.7
August.....	128.1	116.2	1939		
September.....	128.1	115.9	January.....	99.7	102.9
October.....	128.5	115.9	February.....	99.7	103.0
November.....	125.7	116.1	March.....	98.5	103.0
December.....	125.7	116.1	April.....	99.9	103.0
1937			May.....	100.3	102.9
January.....	125.7	122.1	June.....	100.3	103.0
February.....	126.9	122.1	July.....	100.3	100.0
March.....	129.7	122.2	August.....	100.0	100.0
April.....	129.7	122.0	September.....	99.7	100.0
May.....	126.4	122.5			

Specification: Roofing, asphalt strip shingles, square butt, 3-in-1 strip, approximately 210 pounds per square; per square.

Wholesale: Carlots, manufacturer to retail distributor, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 31.—*Asphalt strip shingle roofing*

REGION I. NEW ENGLAND

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	112.9	120.4	June.....	129.6	131.6
February.....	112.9	120.4	July.....	129.6	133.1
March.....	112.9	120.4	August.....	129.6	133.1
April.....	112.9	120.4	September.....	124.0	133.1
May.....	112.9	120.2	October.....	124.0	132.6
June.....	112.9	120.2	November.....	112.0	132.6
July.....	112.9	120.2	December.....	112.0	132.6
August.....	112.9	120.2	1938		
September.....	117.1	120.1	January.....	112.9	128.7
October.....	117.1	119.8	February.....	102.1	128.7
November.....	117.1	119.8	March.....	97.8	128.7
December.....	105.1	119.8	April.....	97.8	126.8
1936			May.....	97.8	126.8
January.....	105.1	120.1	June.....	97.8	126.8
February.....	109.3	120.1	July.....	97.8	126.1
March.....	119.3	120.1	August.....	97.8	126.1
April.....	128.2	119.5	September.....	97.8	126.1
May.....	128.2	119.5	October.....	97.8	126.1
June.....	128.2	119.5	November.....	97.8	126.1
July.....	128.2	119.5	December.....	97.8	125.4
August.....	134.0	119.5	1939		
September.....	134.0	119.5	January.....	97.8	100.0
October.....	134.0	119.5	February.....	97.8	100.0
November.....	130.7	119.7	March.....	97.8	100.0
December.....	130.7	121.1	April.....	100.0	100.0
1937			May.....	100.0	100.0
January.....	130.7	131.6	June.....	100.0	100.0
February.....	130.7	131.6	July.....	100.0	100.0
March.....	134.0	131.6	August.....	100.0	100.0
April.....	134.0	131.9	September.....	100.0	100.0
May.....	129.6	131.9			

Specification: Roofing, asphalt strip shingles, square butt, 3-in-1 strip, approximately 210 pounds per square; per square.

Wholesale: Carlots, manufacturer to retail distributor, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 32.—*Asphalt strip shingle roofing*

[Wholesale and retail price indexes—July–September 1939=100.0]

REGION II. NORTH ATLANTIC

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	113.0	-----	June.....	129.8	127.8
February.....	113.0	-----	July.....	129.8	127.8
March.....	113.0	-----	August.....	129.8	127.8
April.....	113.0	-----	September.....	124.2	127.8
May.....	113.0	-----	October.....	124.2	118.0
June.....	113.0	-----	November.....	112.1	118.0
July.....	113.0	-----	December.....	112.1	118.0
August.....	113.0	-----	1938		
September.....	117.3	-----	January.....	113.0	118.0
October.....	117.3	-----	February.....	102.4	118.0
November.....	117.3	-----	March.....	98.2	118.0
December.....	105.2	-----	April.....	97.8	100.0
1936			May.....	97.8	100.0
January.....	105.2	-----	June.....	97.8	100.0
February.....	109.4	-----	July.....	97.8	100.0
March.....	119.5	-----	August.....	97.8	100.0
April.....	128.5	-----	September.....	97.8	100.0
May.....	128.5	-----	October.....	97.8	100.0
June.....	128.5	-----	November.....	97.8	100.0
July.....	128.5	-----	December.....	97.8	100.0
August.....	134.3	-----	1939		
September.....	134.3	-----	January.....	97.8	100.0
October.....	134.3	-----	February.....	97.8	100.0
November.....	130.9	-----	March.....	97.8	100.0
December.....	130.9	-----	April.....	100.0	100.0
1937			May.....	100.0	100.0
January.....	130.9	-----	June.....	100.0	100.0
February.....	130.9	-----	July.....	100.0	100.0
March.....	134.3	-----	August.....	100.0	100.0
April.....	134.3	-----	September.....	100.0	100.0
May.....	129.8	127.8			

Specification: Roofing, asphalt strip shingles, square butt, 3-in-1 strip, approximately 210 pounds per square; per square.

Wholesale: Car lots, manufacturer to retail distributor, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 33.—*Asphalt strip shingle roofing*

[Wholesale and retail price indexes—July–September 1939=100.0]

REGION III.—EAST NORTH CENTRAL

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	113.9	122.2	June.....	131.4	137.0
February.....	113.9	122.2	July.....	131.4	137.0
March.....	113.9	122.2	August.....	131.4	137.0
April.....	113.9	122.2	September.....	125.6	137.0
May.....	113.9	122.2	October.....	125.6	137.0
June.....	113.9	122.2	November.....	113.0	137.0
July.....	113.9	122.2	December.....	113.0	137.0
August.....	113.9	122.2			
September.....	118.3	122.2	1938		
October.....	118.3	122.2	January.....	113.1	115.3
November.....	118.3	122.2	February.....	102.1	115.3
December.....	105.7	121.8	March.....	97.7	115.3
			April.....	97.7	115.3
1936			May.....	97.7	115.3
January.....	105.7	117.4	June.....	97.7	115.3
February.....	110.2	117.4	July.....	97.7	115.3
March.....	120.7	117.4	August.....	97.7	115.3
April.....	130.0	117.4	September.....	97.7	115.3
May.....	130.0	117.4	October.....	97.7	115.3
June.....	130.0	117.4	November.....	97.7	115.3
July.....	130.0	117.4	December.....	97.7	114.9
August.....	136.1	117.4			
September.....	136.1	117.4	1939		
October.....	136.1	117.4	January.....	97.7	101.5
November.....	132.1	117.4	February.....	97.7	101.5
December.....	132.1	117.7	March.....	97.7	101.5
			April.....	100.0	101.5
1937			May.....	100.0	101.5
January.....	132.1	137.0	June.....	100.0	101.5
February.....	132.1	137.0	July.....	100.0	99.6
March.....	136.1	137.0	August.....	100.0	100.2
April.....	136.1	137.0	September.....	100.0	100.2
May.....	131.4	137.0			

Specification: Roofing, asphalt strip shingles, square butt, 3-in-1 strip, approximately 210 pounds per square; per square.

Wholesale: Car lots, manufacturer to retail distributor, f. o. b. cars destination.

Retail: Dealer to contributor, delivered to job site, city.

TABLE 34.—*Asphalt strip shingle roofing*

REGION IV. WEST NORTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	129.8	110.1	June.....	130.2	107.7
February.....	129.8	110.1	July.....	130.2	107.7
March.....	129.8	110.1	August.....	130.2	107.7
April.....	129.8	110.1	September.....	124.6	107.7
May.....	129.8	110.1	October.....	124.6	107.7
June.....	129.8	110.1	November.....	112.3	107.7
July.....	129.8	110.1	December.....	112.3	107.7
August.....	129.8	109.6	1938		
September.....	117.8	109.6	January.....	112.7	104.7
October.....	117.8	109.6	February.....	102.0	104.7
November.....	117.8	109.6	March.....	97.7	104.7
December.....	105.3	109.6	April.....	97.7	104.7
1936			May.....	97.7	104.7
January.....	105.3	109.6	June.....	97.7	104.7
February.....	109.6	109.6	July.....	97.7	103.1
March.....	119.8	109.6	August.....	97.7	103.1
April.....	128.9	108.6	September.....	97.7	103.1
May.....	128.9	108.6	October.....	97.7	103.1
June.....	128.9	108.6	November.....	97.7	103.1
July.....	128.9	108.6	December.....	97.7	103.1
August.....	134.8	108.6	1939		
September.....	134.8	108.6	January.....	97.7	102.1
October.....	134.8	108.6	February.....	97.7	102.1
November.....	131.4	108.6	March.....	97.7	102.1
December.....	131.4	108.6	April.....	100.0	102.1
1937			May.....	100.0	100.0
January.....	131.4	108.7	June.....	100.0	100.0
February.....	131.4	108.7	July.....	100.0	100.0
March.....	134.8	108.7	August.....	100.0	100.0
April.....	134.8	106.1	September.....	100.0	100.0
May.....	130.2	106.1			

Specification: Roofing, asphalt strip shingles, square butt, 3-in-1 strip, approximately 210 pounds per square; per square.

Wholesale: Carlots, manufacturer to retail distributor, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 35.—*Asphalt strip shingle roofing*

REGION V. SOUTH ATLANTIC

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	109.9	102.8	June.....	128.4	103.5
February.....	109.9	102.8	July.....	128.4	112.2
March.....	109.9	102.8	August.....	128.4	112.2
April.....	109.9	102.8	September.....	123.7	112.2
May.....	109.9	102.8	October.....	123.1	112.2
June.....	109.9	102.8	November.....	112.4	112.2
July.....	109.9	102.8	December.....	109.5	112.2
August.....	109.9	102.8	1938		
September.....	114.1	102.8	January.....	109.6	109.7
October.....	114.1	102.8	February.....	100.7	109.7
November.....	114.1	102.8	March.....	97.1	109.7
December.....	102.3	102.8	April.....	97.8	109.7
1936			May.....	97.8	109.7
January.....	102.3	102.2	June.....	97.8	109.7
February.....	106.4	102.2	July.....	97.8	109.7
March.....	116.3	102.2	August.....	97.8	109.7
April.....	124.9	102.2	September.....	97.8	109.7
May.....	125.3	102.2	October.....	97.8	109.7
June.....	124.9	102.2	November.....	97.8	109.7
July.....	124.9	102.6	December.....	97.8	109.7
August.....	130.6	102.6	1939		
September.....	130.6	102.6	January.....	97.8	108.5
October.....	131.5	102.6	February.....	97.8	108.5
November.....	128.7	102.6	March.....	97.8	108.5
December.....	128.7	102.6	April.....	99.3	108.5
1937			May.....	100.0	108.5
January.....	128.7	103.5	June.....	100.0	108.5
February.....	129.2	103.5	July.....	100.0	100.0
March.....	132.0	103.5	August.....	100.0	100.0
April.....	132.0	103.5	September.....	100.0	100.0
May.....	128.4	103.5			

Specification: Roofing, asphalt strip shingles, square butt, 3-in-1 strip, approximately 210 pounds per square, per square.

Wholesale: Carlots, manufacturer to retail distributor, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 36.—*Asphalt strip shingle roofing*

REGION VI. EAST SOUTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1936			1938		
January.....		118.6	January.....	95.6	106.7
February.....		118.6	February.....	95.6	98.3
March.....		118.6	March.....	95.6	98.3
April.....	105.7	118.6	April.....	98.3	98.3
May.....	105.7	118.6	May.....	98.3	98.3
June.....	105.7	118.6	June.....	98.3	98.3
July.....	105.7	118.6	July.....	98.3	98.3
August.....	110.9	118.6	August.....	98.3	98.3
September.....	110.9	113.8	September.....	98.3	98.3
October.....	116.3	113.8	October.....	98.3	98.3
November.....	116.3	113.8	November.....	98.3	98.3
December.....	116.3	113.8	December.....	98.3	98.3
1937			1939		
January.....	116.3	115.9	January.....	98.3	98.3
February.....	119.4	115.9	February.....	98.3	98.3
March.....	119.4	115.9	March.....	98.3	98.2
April.....	119.4	115.9	April.....	98.3	98.3
May.....	124.6	115.9	May.....	100.0	98.3
June.....	124.6	115.9	June.....	100.0	98.3
July.....	124.6	115.9	July.....	100.0	100.0
August.....	124.6	115.6	August.....	100.0	100.0
September.....	124.6	115.6	September.....	100.0	100.0
October.....	119.4	112.3			
November.....	119.4	112.3			
December.....	95.6	106.7			

Specification: Roofing, asphalt strip shingles, square butt, 3-in-1 strip, approximately 210 pounds per square; per square.

Wholesale: Carlots, manufacturer to retail distributor, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 37.—*Asphalt strip shingle roofing*

REGION VII. WEST SOUTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	101.1	100.0	June.....	124.1	100.0
February.....	101.1	100.0	July.....	124.1	100.0
March.....	101.1	100.0	August.....	124.1	100.0
April.....	101.1	100.0	September.....	121.9	100.0
May.....	101.1	100.0	October.....	119.1	100.0
June.....	101.1	100.0	November.....	111.0	100.0
July.....	101.1	100.0	December.....	101.9	100.0
August.....	101.1	100.0	1938		
September.....	104.5	100.0	January.....	102.3	100.0
October.....	104.5	100.0	February.....	98.1	100.0
November.....	104.5	100.0	March.....	96.4	100.0
December.....	94.8	100.0	April.....	98.0	100.0
1936			May.....	98.0	100.0
January.....	94.8	100.0	June.....	98.0	100.0
February.....	98.2	100.0	July.....	98.0	100.0
March.....	106.3	100.0	August.....	98.0	100.0
April.....	113.5	100.0	September.....	98.0	100.0
May.....	113.5	100.0	October.....	98.0	100.0
June.....	113.5	100.0	November.....	98.0	100.0
July.....	113.5	100.0	December.....	98.0	100.0
August.....	118.6	100.0	1939		
September.....	118.6	100.0	January.....	98.0	100.0
October.....	121.5	100.0	February.....	98.0	100.0
November.....	120.2	100.0	March.....	98.0	100.0
December.....	120.2	100.0	April.....	98.2	100.0
1937			May.....	100.0	100.0
January.....	120.2	100.0	June.....	100.0	100.0
February.....	121.8	100.0	July.....	100.0	100.0
March.....	123.1	100.0	August.....	100.0	100.0
April.....	123.1	100.0	September.....	100.0	100.0
May.....	124.1	100.0			

Specification: Roofing, asphalt strip shingles, square butt, 3-in-1 strip, approximately 210 pounds per square; per square.

Wholesale: Carlots, manufacturer to retail distributor, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 38.—*Asphalt strip shingle roofing*

[Wholesale and retail price indexes—July–September 1939=100.0]

REGION VIII. ROCKY MOUNTAIN

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	114.5	99.6	June.....	129.1	105.0
February.....	114.5	99.6	July.....	129.1	105.4
March.....	114.5	99.9	August.....	129.1	105.4
April.....	114.5	100.4	September.....	124.2	105.5
May.....	114.5	102.2	October.....	124.2	105.5
June.....	114.5	102.2	November.....	113.7	105.5
July.....	114.5	102.2	December.....	113.7	105.5
August.....	114.5	102.2	1938		
September.....	118.2	102.2	January.....	115.3	105.1
October.....	118.2	102.2	February.....	106.2	105.1
November.....	118.2	102.2	March.....	102.5	105.1
December.....	107.7	99.5	April.....	102.8	105.1
1936			May.....	102.8	100.9
January.....	107.7	101.3	June.....	102.8	100.9
February.....	111.4	101.3	July.....	102.8	100.9
March.....	120.1	101.3	August.....	102.8	100.9
April.....	127.9	101.0	September.....	102.8	100.3
May.....	127.9	101.3	October.....	102.8	100.3
June.....	127.9	101.8	November.....	102.8	100.3
July.....	127.9	102.2	December.....	102.8	99.7
August.....	132.9	102.2	1939		
September.....	132.9	102.2	January.....	102.8	98.6
October.....	132.9	102.2	February.....	102.8	98.6
November.....	130.0	104.6	March.....	99.8	98.6
December.....	130.0	102.8	April.....	100.8	98.6
1937			May.....	100.8	98.8
January.....	130.0	103.1	June.....	100.8	100.5
February.....	130.0	103.7	July.....	100.8	100.5
March.....	132.9	103.9	August.....	99.8	99.9
April.....	132.9	103.9	September.....	99.4	99.5
May.....	129.1	105.0			

Specification: Roofing, asphalt strip shingles, square butt, 3-in-1 strip, approximately 210 pounds per square; per square.

Wholesale: Carlots, manufacturer to retail distributor, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 39.—*Asphalt strip shingle roofing*

[Wholesale and retail price indexes—July–September 1939=100.0]

REGION IX. PACIFIC

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	112.6	125.1	June.....	108.8	125.6
February.....	112.6	125.1	July.....	108.8	126.1
March.....	112.6	125.1	August.....	108.8	126.1
April.....	121.5	125.1	September.....	113.1	126.0
May.....	121.5	125.1	October.....	113.1	115.8
June.....	121.5	125.1	November.....	113.1	115.8
July.....	121.5	125.1	December.....	113.1	115.8
August.....	121.5	125.1			
September.....	121.5	125.1	1938		
October.....	121.5	125.1	January.....	113.1	115.8
November.....	121.5	125.1	February.....	113.1	115.8
December.....	121.5	125.1	March.....	113.1	115.8
			April.....	113.1	115.8
1936			May.....	113.1	114.8
January.....	121.5	125.1	June.....	113.1	114.8
February.....	113.5	125.5	July.....	113.1	114.8
March.....	113.5	125.5	August.....	113.1	114.8
April.....	101.8	125.5	September.....	113.1	114.8
May.....	105.3	124.6	October.....	113.1	114.8
June.....	111.0	124.6	November.....	113.1	114.8
July.....	111.0	124.6	December.....	113.1	114.8
August.....	95.7	124.6			
September.....	95.7	124.6	1939		
October.....	95.7	124.6	January.....	113.1	114.2
November.....	95.7	124.6	February.....	113.1	115.2
December.....	95.7	124.6	March.....	103.7	115.2
			April.....	102.6	115.2
1937			May.....	102.1	115.2
January.....	95.7	124.6	June.....	102.1	115.2
February.....	104.0	124.6	July.....	102.1	100.0
March.....	104.0	124.6	August.....	100.4	100.0
April.....	104.0	124.6	September.....	97.6	100.0
May.....	104.0	124.6			

Specification: Roofing, asphalt strip shingles, square butt, 3-in-1 strip, approximately 210 pounds per square per square.

Wholesale: Carlots, manufacturer to retail distributor, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 40.—All rail freight rates for asphalt roofing from nearest shipping point to selected destinations, January 1935 to December 1938

Destination	Nearest producing point	Effective date						
		Jan. 1, 1935	Aug. 10, 1935	Dec. 20, 1937	Feb. 3, 1938	Mar. 1, 1938	Mar. 28, 1938	July 28, 1938
Alabama: Birmingham	Mobile, Ala.	29	-----	-----	-----	-----	32	-----
Arkansas: Little Rock	Waterloo, Ark.	22	-----	24	-----	-----	-----	-----
Colorado: Denver	Kansas City, Mo.	46½	-----	51	-----	-----	-----	-----
Connecticut: Hartford	Millis, Mass.	15	-----	17	16	-----	-----	-----
Delaware: Wilmington	(Philadelphia, Pa.)	10	-----	12	-----	-----	-----	-----
District of Columbia: Washington	Edge Moor, Del.	-----	-----	-----	-----	8	-----	-----
	Baltimore, Md.	9½	-----	10½	-----	-----	11½	-----
Florida: Miami	New Orleans, La.	41	-----	43	-----	-----	45	-----
Georgia: Atlanta	Port Wentworth, Ga.	25	30	-----	-----	-----	33	-----
Indiana: Indianapolis	Lockland, Ohio	15	-----	17	16	-----	-----	-----
Iowa: Des Moines	Kansas City, Mo.	16	-----	18	-----	-----	-----	-----
Kansas: Wichita	do	28	-----	30	-----	31	-----	-----
Kentucky: Louisville	Lockland, Ohio	16	-----	18	17	-----	-----	-----
Maine: Portland	East Walpole, Mass.	16	-----	18	-----	-----	-----	-----
Massachusetts: Boston	Norwood, Mass.	9	-----	11	10	-----	-----	-----
Mississippi: Jackson	New Orleans, La.	25	-----	27	-----	-----	28	-----
Montana: Butte	Minneapolis, Minn.	81	-----	83	-----	-----	89	-----
Nebraska: Omaha	Kansas City, Mo.	15½	-----	17½	-----	-----	-----	-----
New Hampshire: Manchester	East Walpole, Mass.	14	-----	16	-----	15	-----	-----
New Jersey: Trenton	Manville, N. J.	9	-----	11	-----	10	-----	-----
New Mexico: Albuquerque	Kansas City, Mo.	64	-----	66	-----	-----	70	71
New York: New York	Jersey City, N. J.	10	-----	12	-----	11	-----	-----
North Carolina: Charlotte	Port Wentworth, Ga.	29	-----	31	-----	-----	32	-----
North Dakota: Fargo	Minneapolis, Minn.	25½	-----	28	-----	-----	-----	-----
Oklahoma: Oklahoma City	Kansas City, Mo.	36	-----	38	-----	-----	40	-----
Rhode Island: Providence	East Walpole, Mass.	10	-----	12	-----	11	-----	-----
South Carolina: Charleston	Port Wentworth, Ga.	19	-----	21	-----	-----	-----	-----
South Dakota: Sioux Falls	Minneapolis, Minn.	20½	-----	22½	-----	-----	-----	-----
Texas:								
Austin	Port Neches, Tex.	31	-----	-----	33	-----	34	-----
Houston	do	19	-----	-----	21	-----	-----	-----
Vermont: Burlington	Millis, Mass.	22	-----	24	-----	-----	-----	-----
Virginia: Richmond	Baltimore, Md.	17	-----	19	-----	-----	-----	-----
West Virginia: Charleston	Lockland, Ohio	19	-----	21	-----	-----	-----	-----
Wisconsin: Milwaukee	Waukegan, Ill.	10	-----	12	-----	-----	-----	-----
Wyoming: Cheyenne	Kansas City, Mo.	46½	-----	51	-----	-----	-----	-----

CHAPTER VI

CEMENT

DESCRIPTION OF THE INDUSTRY

Nature of the Commodity.

An important material used with aggregates to make concrete, cement is generally divided into two classes—natural and portland.

According to R. W. Lesley,¹ the essential difference between the two is that natural cement—

is a direct product of rocks as found in nature, burned usually in open kilns, while portland cement is a scientifically controlled product, made from properly proportioned calcareous and argillaceous materials. When these materials are burned in kilns and artificially proportioned, a chemically combined material called 'clinker' is the result. Natural cement is burned at a lower temperature than required to produce portland cement clinker; but in both cases after burning, the materials are ground into a fine powder, which is the cement of commerce.

During the last half of the eighteenth century, engineers in France and England discovered that the hydraulic properties of limestone depended not upon color or texture, as previously supposed, but on the amount of clay entering into its composition. One French and two English engineers started the separate manufacture of natural cement. Their products were essentially the same, containing about 45 percent of lime to 30 percent of silica and alumina.² In the United States, however, until the construction of canals called for water-resisting materials, the readily available supply of timber was used for all kinds of structures. Natural cement rock was first discovered in this country in 1818 and from that date the industry developed gradually until 70 concerns were producing over 8,000,000 barrels yearly, in 1898. Production was centered chiefly in Rosendale, N. Y., which furnished 41.9 percent of the Nation's total. Plants were also located in other Eastern States.³

The cement industry in this country is today chiefly concerned with the manufacture of portland cement, which dates from the year 1872 when a small unsuccessful plant was established in Michigan. Shortly thereafter a commercially successful plant was started in the Lehigh Valley, Pa.⁴

In the early days of the industry, it was believed that the Lehigh Valley was the only source of material suitable for the process, but gradually other sources were discovered. Today portland cement is manufactured in 35 States and has constituted at least 98 percent of all cements produced in this country in any one year since 1910.

¹ R. W. Lesley, *History of the Portland Cement Industry in the United States*, Chicago, 1924.

² *Ibid.*, p. 12.

³ *Ibid.*, pp. 13, 33.

⁴ National Recovery Administration, Division of Research and Planning, *The Manufacturing Capacity Volume and Costs of Portland Cement in the United States*, by H. E. Hilts, October 5, 1934, p. 1. (Hereinafter abbreviated as N. R. A., Hilts' Report.)

In recent years, regular or standard portland cements have been greatly improved.⁵ They attain increased strength for ordinary use in a much shorter time and have higher ultimate strength and better workability than cements made in the earlier years. Moreover, new conditions have called for additional types of cements with specialized qualities as, for example, high early strength, unusual plasticity, low or moderate heat of setting, and high resistance to chemical reaction. Cement of high early strength is especially adapted for street work which requires faster than the normal rate of drying; cement hardening at low or moderate heat is particularly suited for use in the construction of large mass work. As further developments in the economy have called for new uses, the industry has responded with special types which are being called into increasing use.

The steps in the process of manufacturing cement are—

- (1) Quarrying, digging, or dredging the limestone marls, oyster shells, or calcareous materials.
- (2) Digging the clays or shales.
- (3) Transporting the raw materials to the mill.
- (4) Storing them until used.
- (5) Mixing them in the proper proportions.
- (6) Pulverizing the mixture, either dry or when mixed with water.
- (7) Storing the dry mix or slurry when the wet process is used.
- (8) Burning the raw mix.
- (9) Cooling the clinker.
- (10) Storing the clinker.
- (11) Grinding the clinker with a small admixture of gypsum.
- (12) Storing the finished cement.
- (13) Packing and loading the product.

There are also auxiliary operations such as—

- (a) Manufacture of power.
- (b) Drying and pulverizing bituminous coals used for burning the clinker.
- (c) Operation of machine shop.
- (d) Technical supervision by inspection and tests of all raw materials used both before, during, and after the manufacturing operations are completed.
- (e) Installation and operation of pumping plants for mill water supply.⁶

Industrial Trends.

In 1938 the output of 151 portland cement plants was 105,000,000 barrels with a total mill value of \$154,000,000. While this represents a decline from the recovery level of 1937, it is substantially above the low levels of 1932–35. The industry experienced its greatest growth in the decade ending in 1929. In 1918 domestic plants shipped 71,000,000 barrels of portland cement; in 1928, the peak year, shipments amounted to 176,000,000 barrels. Cement plants employed 25,000 men in 1919, and 33,000 in 1929. By 1933 employees had dropped to slightly under 16,000 and total wages paid to \$14,000,000, compared with \$49,000,000 in 1929.

⁵ Bureau of Mines, *Minerals Yearbook*, 1939, p. 1109, "Cement".

⁶ N. R. A., *Hilts' Report*, op. cit., pp. 1-3, and additional steps included at the suggestion of members of the industry.

Concentration.

Although there are at present 85 companies manufacturing portland cement in the United States, the 5 largest companies owned more than one-third of all the plants in 1931 and produced 47 percent of the output east of the Rocky Mountains. A further 18 percent was produced by mills at or near the basing points of these 5 companies and 30 percent was produced by non-basing-point mills in the same territory.⁷

PRICE STRUCTURE

Channels of Distribution.

Cement is usually sold by the manufacturers to building material dealers and, in turn, by dealers to contractors. On large jobs, manufacturers sometimes sell direct to large consumers, such as the Government and railroads.

Basing-Point Prices.

Portland cement is generally priced under the so-called "multiple basing-point system" and is quoted to consumers on the basis of a destination price. Stated in its simplest terms, the price a consumer pays is determined by the lowest sum of a base price, plus freight from the base to destination, regardless of the origin of shipment. According to the Federal Trade Commission complaint,⁸ there are some 60 basing points scattered throughout the country, usually at the producing centers. Prices are established at basing points and the determination of the destination price is then a matter of adding freight from basing point to destination. The erection of a new mill may or may not mean the establishment of a new basing point. It is this characteristic which differentiates the multiple basing-point system from other methods of freight equalization.

PRICE LEVELS AND TRENDS

Geographical Variations in Levels and Spreads.

In September 1939 the averages of typical wholesale and retail prices in the 26 cities, where both series were available, were \$2.01 and \$2.67 per barrel, respectively. Although the wholesale prices ranged from \$1.40 to \$2.93, prices in 16 of the cities varied only narrowly, between the limits of \$1.75 to \$2.25. Retail prices varied from \$1.80 to \$3.96 per barrel; in 19 of the 26 cities, the range was only from \$2 to \$3. In general, the highest prices were reported in the West South Central and Rocky Mountain States, more distant from producing areas, and the lowest were in the East North Central area. The range of prices in the various cities follows:

Prices	Number of cities		Prices	Number of cities	
	Wholesale	Retail		Wholesale	Retail
\$1.00 to \$1.24.....			\$2.75 to \$2.99.....	1	3
\$1.25 to \$1.49.....	1		\$3.00 to \$3.24.....		4
\$1.50 to \$1.74.....	3		\$3.25 to \$3.49.....		
\$1.75 to \$1.99.....	8	1	\$3.50 to \$3.74.....		1
\$2.00 to \$2.24.....	8	3	\$3.75 to \$3.99.....		1
\$2.25 to \$2.49.....	5	4	\$4.00 to \$4.24.....		
\$2.50 to \$2.74.....		9			

⁷ Federal Trade Commission, Price Bases Inquiry, The Basing-Point Formula and Cement Prices, March 1932, p. 69.

⁸ In the matter of the Cement Institute et al., Docket No. 3167.

As previously stated, the average wholesale price of \$2.01 per barrel was marked up to \$2.67, or 33 percent, on sales at retail. The spread between wholesale and retail prices varied greatly among the 26 cities, from as low as 8 percent to as high as 78 percent. In 18 of the 26 cities, mark-ups varied between 11 and 39 percent. The higher spreads were reported in the Rocky Mountain area and the lower in the East North Central region. The national distribution follows:

Difference between wholesale and retail prices (percent)	Number of cities	Difference between wholesale and retail prices (percent)	Number of cities
0 to 9.....	1	40 to 49.....	2
10 to 19.....	5	50 to 59.....	3
20 to 29.....	8	60 to 69.....	1
30 to 39.....	5	70 to 79.....	1

*Wholesale and Retail Price Trends.*⁹ (See chart VI and tables 41-50.)

The national composites of cement prices both at wholesale and at retail moved in a very narrow range between 1935 and September 1939. The only change of more than 5 percent was a cumulative decline of 9 percent in retail prices in the first 8 months of 1935. The net change during the period was a 6 percent decline at retail and a 2 percent decline in the wholesale index. Price trends in the West North Central, the East South Central, the West South Central, and the Rocky Mountain areas were even more rigid than the national averages.

In New England the wholesale price declined 13 percent from January 1935 to January 1937 but recovered to its former level in July 1938. The retail price decline in 1937 was only 8 percent while the advance in 1938 was 20 percent for a net gain of 11 percent during the 5-year period.

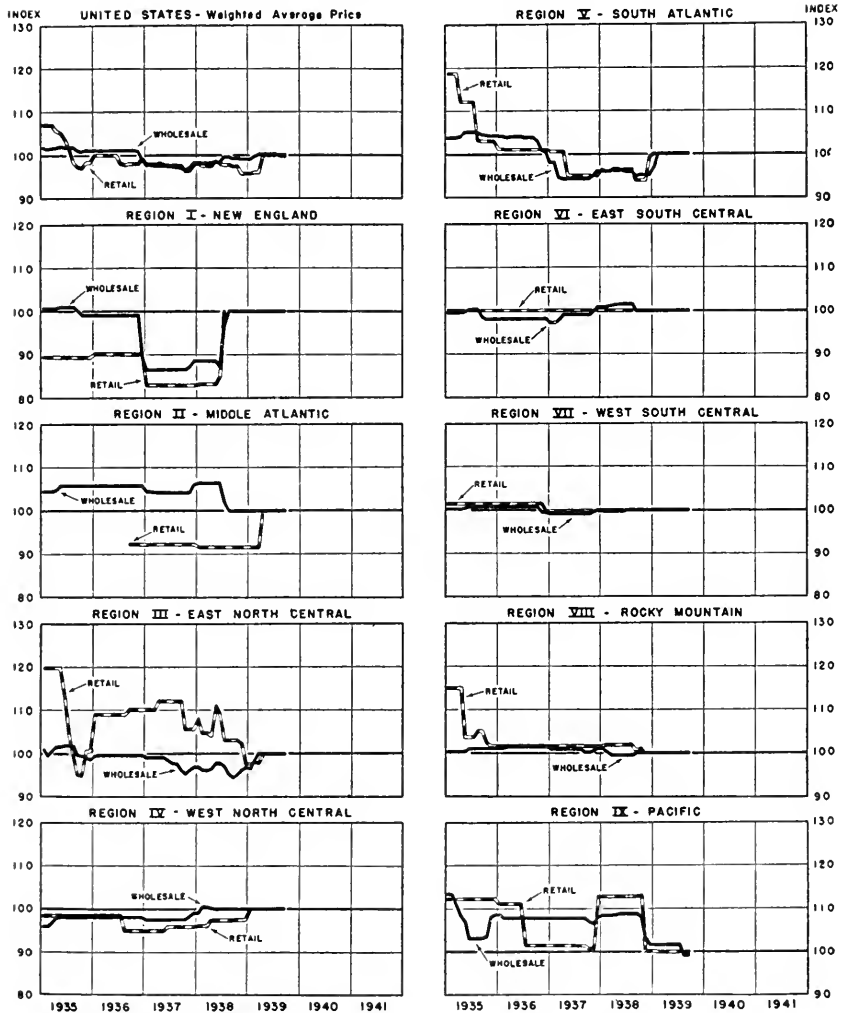
In the East North Central region, while the wholesale price remained relatively stable, varying between 95 percent and 102 percent of the July-September 1939 average, the retail price experienced three major changes—a drop of 20 percent in the summer of 1935, followed by a recovery of about half the decline in the following winter, and a cumulative 12 percent drop in the fall of 1937 and 1938. In the Middle Atlantic area, both wholesale and retail prices showed only one major change during the period for which data are available, but the changes were in opposite directions. The wholesale index dropped 6 percent in the summer of 1938 and the retail index rose about 9 percent in March 1939.

In the South Atlantic area, except for a 16 percent drop in retail prices in 1935 which did not occur in wholesale prices, the wholesale and retail indexes moved together, declining about 9 percent early in 1937 and rising about 4 percent late in 1938. In the Pacific area,

⁹ The retail price trends were based on the regular list of cities covered by the survey. Wholesale price trends, however, were based on a slightly different combination of cities by regions which included many of the survey cities. By regions, the cities included in the wholesale price trends were as follows:

New England: Albany, Boston, New York; Middle Atlantic: Buffalo, Johnstown, Philadelphia, Pittsburgh, Scranton, East North Central: Chicago, Cleveland, Detroit, Grand Rapids, Lima, Milwaukee, Terre Haute, Toledo; West North Central: Duluth, Kansas City (Mo.), Mason City, Minneapolis, St. Louis; South Atlantic: Baltimore, Jacksonville, Miami, Norfolk, Richmond, Tampa, Waycross, Wilmington (N. C.), Winston-Salem; East South Central: Atlanta, Birmingham, Cincinnati, Huntington (W. Va.); West South Central: Dallas, Houston, New Orleans, San Antonio, Wichita; Rocky Mountain: Denver, El Paso, Helena, Salt Lake City; Pacific: Los Angeles, Portland (Oreg.), San Francisco, Seattle, Spokane.

CHART VI
PORTLAND CEMENT
 WHOLESALE AND RETAIL PRICE INDEXES
 JULY - SEPTEMBER 1939 = 100



although the net change was the same for both wholesale and retail—a decline of about 12 percent—the interim pattern of price movements was different. The wholesale index dropped 10 percent early in 1935, rose 5 percent later in the year and again declined 6 percent in the fall of 1938, while retail prices fell 9 percent in 1936, rose 12 percent late in 1937, and dropped to the previous level in 1938.

TABLE 41.—*Portland cement*
COMPOSITE UNITED STATES AVERAGE

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	101.8	107.2	June.....	97.4	97.5
February.....	101.5	107.2	July.....	97.3	97.5
March.....	101.6	107.2	August.....	97.2	97.5
April.....	101.8	105.9	September.....	97.0	97.5
May.....	102.0	105.3	October.....	96.6	96.5
June.....	101.8	103.7	November.....	97.2	96.5
July.....	101.8	101.5	December.....	98.2	97.9
August.....	101.8	98.4	1938		
September.....	101.0	97.3	January.....	98.3	98.1
October.....	100.8	97.1	February.....	98.3	97.6
November.....	101.1	98.5	March.....	98.3	97.6
December.....	101.0	98.5	April.....	98.4	97.6
1936			May.....	98.6	98.6
January.....	101.2	100.0	June.....	98.4	98.3
February.....	101.1	100.0	July.....	99.6	97.8
March.....	101.1	100.0	August.....	99.6	97.8
April.....	101.1	100.0	September.....	99.3	97.4
May.....	101.1	100.0	October.....	99.3	97.5
June.....	101.1	100.0	November.....	99.2	95.8
July.....	101.1	98.1	December.....	99.2	95.8
August.....	101.1	97.9	1939		
September.....	101.1	98.2	January.....	99.2	95.9
October.....	101.1	98.2	February.....	99.8	96.0
November.....	100.8	98.2	March.....	100.1	96.0
December.....	98.8	98.1	April.....	100.1	100.0
1937			May.....	100.1	100.0
January.....	97.7	97.8	June.....	100.1	100.0
February.....	97.7	97.8	July.....	100.1	100.0
March.....	97.5	97.8	August.....	99.9	100.0
April.....	97.5	98.2	September.....	99.9	100.0
May.....	97.5	97.5			

Specification: Cement, portland, per barrel.

Wholesale: Gross in cloth, carlots, manufacturer to dealer, f. o. b. cars destination.

Retail: In paper bags, dealer to contractor, delivered to job site, city.

TABLE 42.—*Portland cement*

REGION I. NEW ENGLAND

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	100.7	89.6	June.....	86.6	83.1
February.....	100.7	89.6	July.....	86.6	83.1
March.....	100.7	89.6	August.....	86.6	83.1
April.....	100.8	89.6	September.....	86.6	83.1
May.....	101.0	89.6	October.....	86.6	83.1
June.....	101.0	89.6	November.....	87.4	83.1
July.....	101.0	89.6	December.....	88.7	83.1
August.....	101.0	89.6	1938		
September.....	100.1	89.6	January.....	88.7	83.3
October.....	99.2	89.6	February.....	88.7	83.3
November.....	99.2	89.6	March.....	88.7	83.3
December.....	99.2	89.6	April.....	88.7	83.3
1936			May.....	88.7	83.3
January.....	99.2	90.1	June.....	87.4	85.1
February.....	99.2	90.1	July.....	96.7	100.0
March.....	99.2	90.1	August.....	100.0	100.0
April.....	99.2	90.1	September.....	100.0	100.0
May.....	99.2	90.1	October.....	100.0	100.0
June.....	99.2	90.1	November.....	100.0	100.0
July.....	99.2	90.1	December.....	100.0	100.0
August.....	99.2	90.1	1939		
September.....	99.2	90.1	January.....	100.0	100.0
October.....	99.2	90.1	February.....	100.0	100.0
November.....	99.2	90.1	March.....	100.0	100.0
December.....	89.3	90.1	April.....	100.0	100.0
1937			May.....	100.0	100.0
January.....	86.6	83.1	June.....	100.0	100.0
February.....	86.6	83.1	July.....	100.0	100.0
March.....	86.6	83.1	August.....	100.0	100.0
April.....	86.6	83.1	September.....	100.0	100.0
May.....	86.6	83.1			

Specification: Cement, portland, per barrel.

Wholesale: Gross in cloth, carlots, manufacturer to dealer, f. o. b. cars destination.

Retail: In paper bags, dealer to contractor, delivered to job site, city.

TABLE 43.—*Portland cement*

REGION II. MIDDLE ATLANTIC

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	104.5	-----	June.....	104.3	92.3
February.....	104.5	-----	July.....	104.3	92.3
March.....	104.5	-----	August.....	104.3	92.3
April.....	104.8	-----	September.....	104.3	92.3
May.....	105.8	-----	October.....	104.3	92.3
June.....	105.8	-----	November.....	104.4	92.3
July.....	105.8	-----	December.....	106.0	92.3
August.....	105.8	-----	1938		
September.....	105.8	-----	January.....	106.5	91.6
October.....	105.8	-----	February.....	106.5	91.6
November.....	105.8	-----	March.....	106.5	91.6
December.....	105.8	-----	April.....	106.5	91.6
1936			May.....	106.5	91.6
January.....	105.8	-----	June.....	106.5	91.6
February.....	105.8	-----	July.....	102.0	91.6
March.....	105.8	-----	August.....	100.0	91.6
April.....	105.8	-----	September.....	100.0	91.6
May.....	105.8	-----	October.....	100.0	91.6
June.....	105.8	-----	November.....	100.0	91.6
July.....	105.8	-----	December.....	100.0	91.6
August.....	105.8	-----	1939		
September.....	105.8	92.3	January.....	100.0	91.6
October.....	105.8	92.3	February.....	100.0	91.6
November.....	105.8	92.3	March.....	100.0	91.6
December.....	105.8	92.3	April.....	100.0	100.0
1937			May.....	100.0	100.0
January.....	104.5	92.3	June.....	100.0	100.0
February.....	104.5	92.3	July.....	100.0	100.0
March.....	104.4	92.3	August.....	100.0	100.0
April.....	104.3	92.3	September.....	100.0	100.0
May.....	104.3	92.3			

Specification: Cement, portland; per barrel.

Wholesale: Gross in cloth, carlots, manufacturer to dealer, f. o. b. cars destination.

Retail: In paper bags, dealer to contractor, delivered to job site, city.

TABLE 44.—*Portland cement*

REGION III. EAST NORTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	100.8	119.7	June.....	98.6	112.2
February.....	99.6	119.7	July.....	97.9	112.2
March.....	100.6	119.7	August.....	97.7	112.2
April.....	101.5	119.7	September.....	96.3	112.2
May.....	101.6	119.7	October.....	95.5	105.8
June.....	101.8	113.3	November.....	96.3	105.8
July.....	101.9	104.8	December.....	96.9	105.8
August.....	101.8	99.4			
September.....	99.8	95.1	1938		
October.....	99.5	96.1	January.....	96.9	108.0
November.....	99.1	100.5	February.....	96.3	104.7
December.....	98.7	100.5	March.....	96.1	104.7
1936			April.....	96.5	104.2
January.....	99.5	109.0	May.....	97.8	110.9
February.....	99.7	109.0	June.....	97.8	109.2
March.....	99.7	109.0	July.....	97.3	103.1
April.....	99.7	109.0	August.....	95.5	103.1
May.....	99.7	109.0	September.....	94.6	103.1
June.....	99.7	109.0	October.....	95.1	103.1
July.....	99.7	109.0	November.....	96.2	102.4
August.....	99.7	109.0	December.....	96.8	97.5
September.....	99.7	110.1			
October.....	99.7	110.1	1939		
November.....	99.7	110.1	January.....	96.6	97.5
December.....	99.7	110.1	February.....	98.5	97.9
1937			March.....	100.0	97.9
January.....	99.0	110.1	April.....	100.0	100.0
February.....	99.0	110.1	May.....	100.0	100.0
March.....	99.0	110.1	June.....	100.0	100.0
April.....	99.0	112.2	July.....	100.0	100.0
May.....	99.0	112.2	August.....	100.0	100.0
			September.....	100.0	100.0

Specification: Cement, portland; per barrel.

Wholesale: Gross in cloth, carlots, manufacturer to dealer, f. o. b. cars destination.

Retail: In paper bags, dealer to contractor, delivered to job site, city.

TABLE 45.—*Portland cement*

REGION IV. WEST NORTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	96.0	98.4	June.....	97.7	96.0
February.....	96.0	98.4	July.....	97.7	96.0
March.....	96.9	98.4	August.....	97.7	96.0
April.....	97.8	98.4	September.....	97.7	96.0
May.....	98.2	98.4	October.....	97.7	96.0
June.....	98.2	98.4	November.....	98.4	96.0
July.....	98.2	98.4	December.....	99.1	96.0
August.....	98.2	98.4	1938		
September.....	98.2	98.4	January.....	99.1	96.1
October.....	98.2	98.4	February.....	100.5	96.1
November.....	98.2	98.4	March.....	100.5	96.1
December.....	98.2	98.4	April.....	100.3	97.5
1936			May.....	100.0	97.5
January.....	98.2	98.5	June.....	100.0	97.5
February.....	98.2	98.5	July.....	100.0	97.5
March.....	98.2	98.5	August.....	100.0	97.5
April.....	98.2	98.5	September.....	100.0	97.5
May.....	98.2	98.5	October.....	100.0	97.5
June.....	98.2	98.5	November.....	100.0	97.5
July.....	98.2	98.5	December.....	100.0	97.5
August.....	98.2	95.0	1939		
September.....	98.2	95.0	January.....	100.0	100.0
October.....	98.2	95.0	February.....	100.0	100.0
November.....	98.2	95.0	March.....	100.0	100.0
December.....	98.2	95.0	April.....	100.0	100.0
1937			May.....	100.0	100.0
January.....	97.7	95.0	June.....	100.0	100.0
February.....	97.7	95.0	July.....	100.0	100.0
March.....	97.7	95.0	August.....	100.0	100.0
April.....	97.7	95.0	September.....	100.0	100.0
May.....	97.7	95.0			

Specification: Cement, portland; per barrel.

Wholesale: Gross in cloth, carlots, manufacturer to dealer, f. o. b. cars destination.

Retail: In paper bags, dealer to contractor, delivered to job site, city.

TABLE 46.—*Portland cement*

REGION V. SOUTH ATLANTIC

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	103.9	118.8	June.....	94.4	95.2
February.....	103.9	118.8	July.....	94.4	95.2
March.....	103.9	118.8	August.....	94.4	95.2
April.....	104.2	112.3	September.....	94.4	95.2
May.....	105.2	112.3	October.....	94.4	95.2
June.....	105.3	112.3	November.....	95.1	95.2
July.....	105.3	112.3	December.....	96.2	95.2
August.....	105.2	103.4	1938		
September.....	104.7	103.1	January.....	96.2	96.4
October.....	104.5	103.1	February.....	96.2	96.4
November.....	104.3	103.1	March.....	96.3	96.4
December.....	104.3	103.1	April.....	96.5	96.4
1936			May.....	96.5	96.4
January.....	104.3	101.3	June.....	96.3	96.4
February.....	104.1	101.3	July.....	96.1	96.5
March.....	103.9	101.2	August.....	96.1	96.5
April.....	104.0	101.2	September.....	95.0	94.0
May.....	104.0	101.2	October.....	95.3	94.0
June.....	104.0	101.2	November.....	95.3	94.0
July.....	103.8	101.2	December.....	95.3	92.6
August.....	103.8	101.2	1939		
September.....	103.8	101.2	January.....	96.9	100.0
October.....	103.1	101.2	February.....	100.0	100.0
November.....	100.9	101.2	March.....	100.0	100.0
December.....	100.5	101.2	April.....	100.0	100.0
1937			May.....	100.0	100.0
January.....	98.2	100.6	June.....	100.0	100.0
February.....	98.2	100.6	July.....	100.0	100.0
March.....	94.7	100.6	August.....	100.0	100.0
April.....	94.4	100.6	September.....	100.0	100.0
May.....	94.4	95.2			

Specification: Cement, portland; per barrel.

Wholesale: Gross in cloth, carlots, manufacturer to dealer, f. o. b. cars destination.

Retail: In paper bags, dealer to contractor, delivered to job site, city.

TABLE 47.—*Portland cement*

REGION VI. EAST SOUTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	99.7	100.0	June.....	99.1	100.0
February.....	99.7	100.0	July.....	99.1	100.0
March.....	99.7	100.0	August.....	99.1	100.0
April.....	99.7	100.0	September.....	99.1	100.0
May.....	99.9	100.0	October.....	99.1	100.0
June.....	100.3	100.0	November.....	99.9	100.0
July.....	100.4	100.0	December.....	100.9	100.0
August.....	100.4	100.0	1938		
September.....	98.7	100.0	January.....	100.9	100.0
October.....	98.2	100.0	February.....	100.9	100.0
November.....	98.2	100.0	March.....	101.1	100.0
December.....	98.2	100.0	April.....	101.4	100.0
1936			May.....	101.5	100.0
January.....	98.2	100.0	June.....	101.5	100.0
February.....	98.2	100.0	July.....	101.5	100.0
March.....	98.2	100.0	August.....	101.5	100.0
April.....	98.2	100.0	September.....	100.0	100.0
May.....	98.2	100.0	October.....	100.0	100.0
June.....	98.2	100.0	November.....	100.0	100.0
July.....	98.2	100.0	December.....	100.0	100.0
August.....	98.2	100.0	1939		
September.....	98.2	100.0	January.....	100.0	100.0
October.....	98.2	100.0	February.....	100.0	100.0
November.....	98.2	100.0	March.....	100.0	100.0
December.....	98.2	100.0	April.....	100.0	100.0
1937			May.....	100.0	100.0
January.....	97.3	100.0	June.....	100.0	100.0
February.....	97.3	100.0	July.....	100.0	100.0
March.....	98.0	100.0	August.....	100.0	100.0
April.....	99.1	100.0	September.....	100.0	100.0
May.....	99.1	100.0			

Specification: Cement, portland; per barrel.

Wholesale: Gross in cloth, carlots, manufacturer to dealer, f. o. b. cars destination.

Retail: In paper bags, dealer to contractor, delivered to job site, city.

TABLE 48.—*Portland cement*

REGION VII. WEST SOUTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	100.2	101.5	June.....	99.1	99.8
February.....	100.2	101.5	July.....	99.1	99.8
March.....	100.2	101.5	August.....	99.1	99.8
April.....	100.2	101.5	September.....	99.1	99.8
May.....	100.4	101.5	October.....	99.1	99.8
June.....	100.7	101.5	November.....	99.5	99.8
July.....	100.7	101.5	December.....	100.0	99.8
August.....	100.7	101.5	1938		
September.....	100.7	101.5	January.....	100.0	99.8
October.....	100.7	101.5	February.....	100.0	99.8
November.....	100.7	101.5	March.....	100.0	99.8
December.....	100.7	101.5	April.....	100.0	99.8
1936			May.....	100.0	99.8
January.....	100.7	101.5	June.....	100.0	99.8
February.....	100.7	101.5	July.....	100.0	100.0
March.....	100.7	101.5	August.....	100.0	100.0
April.....	100.7	101.5	September.....	100.0	100.0
May.....	100.7	101.5	October.....	100.0	100.0
June.....	100.7	101.5	November.....	100.0	100.0
July.....	100.7	101.5	December.....	100.0	100.0
August.....	100.7	101.5	1939		
September.....	100.7	101.5	January.....	100.0	100.0
October.....	100.7	101.5	February.....	100.0	100.0
November.....	99.6	101.5	March.....	100.0	100.0
December.....	99.5	99.8	April.....	100.0	100.0
1937			May.....	100.0	100.0
January.....	99.1	99.8	June.....	100.0	100.0
February.....	99.1	99.8	July.....	100.0	100.0
March.....	99.1	99.8	August.....	100.0	100.0
April.....	99.1	99.8	September.....	100.0	100.0
May.....	99.1	99.8			

Specification: Cement, portland; per barrel.

Wholesale: Gross in cloth, carlots, manufacturer to dealer, f. o. b. cars destination.

Retail: In paper bags, dealer to contractor, delivered to job site, city.

TABLE 49.—*Portland cement*

REGION VIII. ROCKY MOUNTAIN

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	100.4	115.1	June.....	100.8	101.7
February.....	100.4	115.1	July.....	100.8	101.7
March.....	100.4	115.1	August.....	100.8	101.7
April.....	100.4	115.1	September.....	100.2	101.5
May.....	100.5	103.7	October.....	100.2	101.5
June.....	101.0	103.7	November.....	100.6	101.5
July.....	101.0	103.7	December.....	101.0	101.5
August.....	101.0	105.2	1938		
September.....	101.0	105.2	January.....	101.0	101.5
October.....	101.0	102.3	February.....	100.4	101.8
November.....	101.0	101.7	March.....	99.7	101.8
December.....	101.0	101.7	April.....	99.7	101.8
1936			May.....	99.7	101.8
January.....	101.0	101.7	June.....	99.7	101.8
February.....	101.1	101.7	July.....	99.7	101.8
March.....	101.4	101.7	August.....	99.9	101.8
April.....	101.4	101.7	September.....	100.0	100.7
May.....	101.4	101.7	October.....	100.0	101.0
June.....	101.4	101.7	November.....	100.0	100.0
July.....	101.4	101.7	December.....	100.0	100.0
August.....	101.4	101.7	1939		
September.....	101.4	101.7	January.....	100.0	100.0
October.....	101.4	101.7	February.....	100.0	100.0
November.....	101.4	101.7	March.....	100.0	100.0
December.....	101.4	101.7	April.....	100.0	100.0
1937			May.....	100.0	100.0
January.....	100.8	101.7	June.....	100.0	100.0
February.....	100.8	101.7	July.....	100.0	100.0
March.....	100.8	101.7	August.....	100.0	100.0
April.....	100.8	101.7	September.....	100.0	100.0
May.....	100.8	101.7			

Specification: Cement, portland; per barrel.

Wholesale: Gross in cloth, carlots, manufacturer to dealer, f.o.b. cars destination.

Retail: In paper bags, dealer to contractor, delivered to job site, city.

TABLE 50.—*Portland cement*

REGION IX. PACIFIC

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	113.5	112.3	June.....	107.9	101.5
February.....	113.4	112.3	July.....	107.9	101.5
March.....	110.9	112.3	August.....	107.9	101.5
April.....	108.5	112.3	September.....	107.9	101.5
May.....	107.2	112.3	October.....	107.1	100.8
June.....	103.3	112.3	November.....	106.7	100.8
July.....	103.3	112.3	December.....	108.1	112.8
August.....	103.3	112.3	1938		
September.....	103.3	112.3	January.....	108.5	112.8
October.....	103.6	112.3	February.....	108.5	112.8
November.....	108.2	112.3	March.....	108.5	112.8
December.....	108.7	112.3	April.....	108.6	112.8
1936			May.....	108.8	112.8
January.....	108.7	111.1	June.....	108.8	112.8
February.....	107.9	111.1	July.....	108.8	112.8
March.....	107.9	111.1	August.....	108.8	112.8
April.....	107.9	111.1	September.....	108.8	112.8
May.....	107.9	111.1	October.....	108.1	113.0
June.....	107.9	111.1	November.....	103.3	106.2
July.....	107.9	101.5	December.....	101.7	100.2
August.....	107.9	101.5	1939		
September.....	107.9	101.5	January.....	101.7	100.2
October.....	107.9	101.5	February.....	101.7	100.0
November.....	107.9	101.5	March.....	101.7	100.0
December.....	107.9	101.5	April.....	101.7	100.0
1937			May.....	101.7	100.0
January.....	107.9	101.5	June.....	101.7	100.0
February.....	107.9	101.5	July.....	101.7	100.0
March.....	107.9	101.5	August.....	99.2	100.0
April.....	107.9	101.5	September.....	99.1	100.0
May.....	107.9	101.5			

Specification: Cement, portland; per barrel.

Wholesale: Gross in cloth, carlots, manufacturer to dealer, f. o. b. cars destination.

Retail: In paper bags, dealer to contractor, delivered to job site, city.

CHAPTER VII

LIME

DESCRIPTION OF THE INDUSTRY

Nature of the Product.

Various types of lime have widespread use in agriculture as fertilizers and soil conditioners, and in building as plasters and mortar binders. In 1937, 9.8 percent of all lime produced was used in agriculture, 23.0 percent for building, 52.2 percent chemically in industry, and 15.0 percent for refractories.¹

Among the types of products are hydrated limes, common lump or quicklimes, finishing limes, and refractory limes.² In 1937 and 1938, hydrated limes constituted 31.6 and 35.0 percent, respectively, of all limes produced in this country. Evidence from N. R. A. records and the National Lime Association indicates that building lime is divided about equally between hydrated and quicklime. Bureau of Labor Statistics field agents report that hydrated lime is gaining in popularity over quicklime because of its relative ease in handling and the smaller danger of spoilage.

Production Statistics.

In 1938, 284 companies produced three and one-third million short tons of lime, having a value of a little over \$24,000,000. About 35 percent of the companies produced less than 1,000 short tons each and accounted for only 8.3 percent of total production. On the other hand, 2 percent of the total number of companies, those producing 100,000 short tons or more, produced 26.1 percent of the industry total.³

Distributed widely geographically, lime was produced in 38 States. Ohio was the leading State, producing 27.6 percent of the national total; Pennsylvania ranked second. Virginia, West Virginia, and Missouri were also important producing centers. (See map III.)

PRICE STRUCTURE

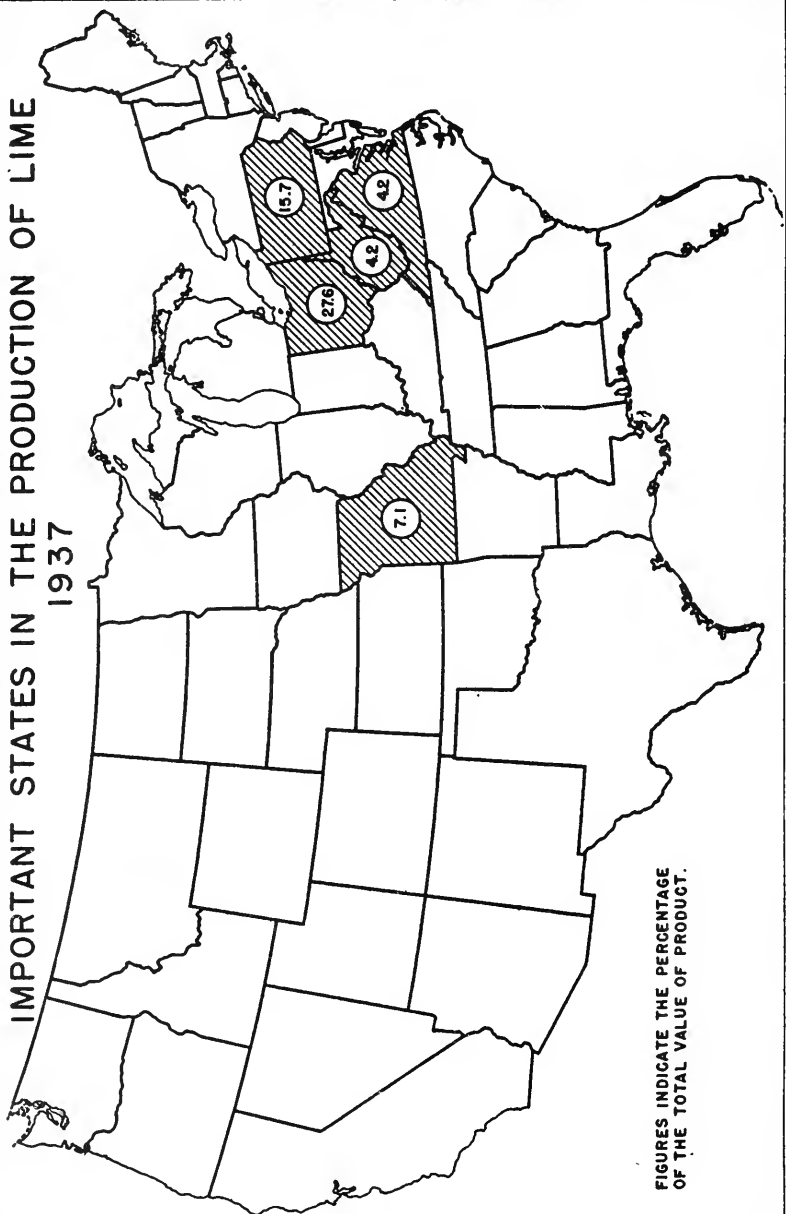
Because of the wide geographical distribution of small companies and plants, the pricing practices of the industry fall in no consistent Nation-wide pattern. Even within narrow regions, pricing methods often differ between companies. Price reports, therefore, are often conflicting.

¹ Bureau of Mines, Minerals Yearbook, 1939, p. 1190. (Lime: Salient Statistics of the Lime Industry in the United States, 1937-38).

² A dolomitic refractory lime is not a pure lime product, but is usually produced by lime manufacturers from the same raw materials in combination with other ingredients.

³ Bureau of Mines, Minerals Yearbook, 1939, p. 1202. (Lime: Salient Statistics of the Lime Industry in the United States, 1937-38).

MAP III

IMPORTANT STATES IN THE PRODUCTION OF LIME
1937FIGURES INDICATE THE PERCENTAGE
OF THE TOTAL VALUE OF PRODUCT.

According to members of the industry, the most important pricing system is that of freight equalization. The basing-point system, however, is practiced to a limited extent. In a few areas, a multiple basing-point system is followed. In other areas, producers charge a straight f. o. b. mill price, plus freight, and they do not seek sales in localities where such a practice will not get business. Finally, a number of producers follow the practice of "meeting the competitive price" in each market in which they attempt to sell, without any formalized method for doing so.

Building lime is marketed generally from producer through building material dealers to contractors and over-the-counter trade. Occasionally, sales are made direct from producers to large consumers.

PRICE LEVELS AND TRENDS

Geographical Variations in Prices and Spreads. (See chart VII and table 51.)

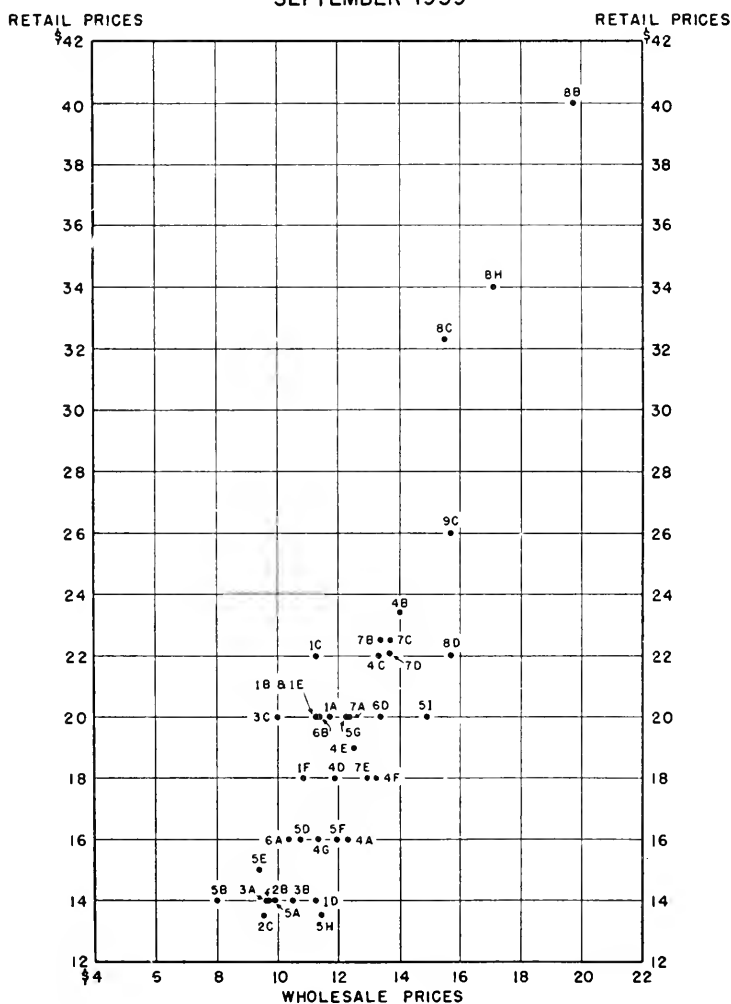
In the 38 cities for which both wholesale and retail prices were reported to the Bureau, price levels and margins varied widely. In September 1939 the wholesale prices ranged from \$8 per ton in Baltimore and Washington to \$19.70 in Boise, Idaho. In the Baltimore market there are many competing producers with plants located nearby and relatively low prices; while the producers entering the Boise market are few and at a distance, and the price is high. Retail prices varied even more widely, from a low of \$12 in New York and \$13.50 in Atlanta, Ga., to a high of \$40 per ton in a Rocky Mountain city. The bulk of wholesale prices is within a narrower range; in 26 of the 38 cities the prices varied between the narrow limits of \$10 to \$14. Retail prices varied from \$14 to \$20 in 17 cities and from \$20 to \$24 in 16 cities. The distribution follows:

Prices	Number of cities		Prices	Number of cities	
	Whole-sale	Retail		Whole-sale	Retail
\$8 to \$9.99	6		\$26 to \$27.99		1
\$10 to \$11.99	15		\$28 to \$29.99		
\$12 to \$13.99	11	2	\$30 to \$31.99		
\$14 to \$15.99	5	7	\$32 to \$33.99		1
\$16 to \$17.99	1	5	\$34 to \$35.99		1
\$18 to \$19.99	1	5	\$36 to \$37.99		
\$20 to \$21.99		9	\$38 to \$39.99		
\$22 to \$23.99		7	\$40 to \$41.99		1
\$24 to \$25.99					

The average of typical wholesale prices in all the cities was \$12.28; the average of retail prices was \$19.64. The highest levels were quoted in the Rocky Mountain area and the lowest in the Middle Atlantic States.

The spread between wholesale and retail prices was in general widest in those regions where the actual level of prices was highest. The average spread for all cities was approximately 60 percent, with the lowest average spread (43 percent) in the Middle Atlantic area and the highest (89 percent) in the Rocky Mountain region. The

CHART VII
HYDRATED LIME
 WHOLESALE AND RETAIL PRICES FOR SELECTED CITIES
 SEPTEMBER 1939



average prices and margins are shown in the following summary, by regions:

Region	Prices		Difference	
	Wholesale	Retail	Actual	Percent
I. New England.....	\$11.25	\$19.00	\$7.75	68.9
II. Middle Atlantic.....	9.62	13.75	4.13	42.9
III. East North Central.....	10.03	16.00	5.97	59.5
IV. West North Central.....	12.64	18.91	6.27	49.6
V. South Atlantic.....	11.08	16.06	4.98	44.9
VI. East South Central.....	11.72	18.67	6.95	59.3
VII. West South Central.....	13.23	21.02	7.79	58.9
VIII. Rocky Mountain.....	17.00	32.08	15.08	88.7
IX. Pacific.....	15.70	26.00	10.30	65.6
United States.....	12.28	19.64	7.36	59.9

Wholesale and Retail Price Trends. (See chart VIII and tables 52 to 61.)

Wholesale prices fluctuated within a limited range between 1935 and September 1939; retail prices moved even more narrowly. The net change of both wholesale and retail national composites was less than 3 percent for the period. The wholesale price fell 10 percent in the first 8 months of 1936, rose 12 percent in 1937, and then dropped again by 7 percent early in 1938; the retail national composite remained virtually unchanged during the 5 years.

Widely different patterns of behavior are revealed through a study of the individual regions. In the East North Central, West South Central, and Rocky Mountain areas both wholesale and retail prices remained practically unchanged. In the Middle Atlantic region, a downswing of 17 percent in the wholesale price in 1936 and a recovery in 1937, followed by a 10 percent decline in 1938 were not reflected in the retail price trend, whose only change was a 7 percent decline during the last half of 1938 and 1939. In the West North Central region the wholesale index climbed 14 percent over a 4-year period, while the only change in the retail price was a 9 percent drop in July 1936. In the South Atlantic area, retail prices remained stable while the wholesale price fluctuated considerably, dropping 14 percent in December 1935, rising 24 percent in December 1936, and again falling 12 percent in December 1937, and 8 percent in December 1938. In the Pacific area, the wholesale price advanced 6 percent in June 1937 and declined 15 percent in August 1939, while the retail price advanced 12 percent in June 1936 and an additional 5 percent in December 1938.

CHART VIII
HYDRATED LIME
WHOLESALE AND RETAIL PRICE INDEXES
JULY - SEPTEMBER 1939 = 100

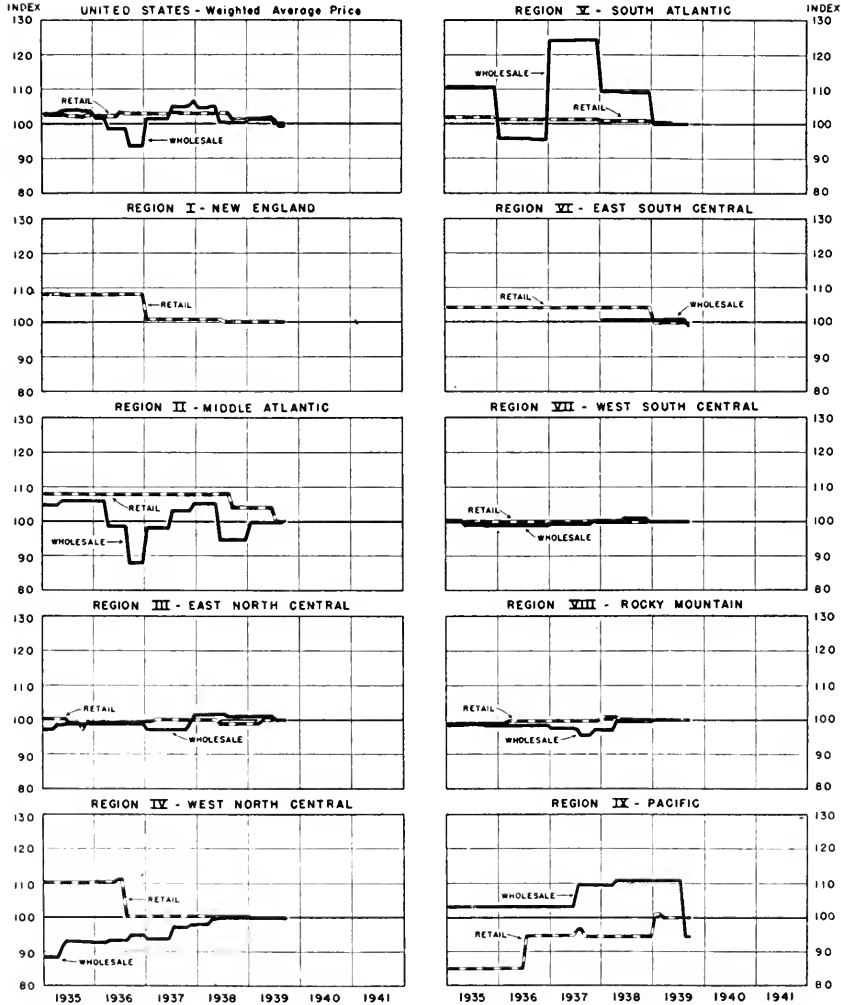


TABLE 51.—*Hydrated lime*

[Typical wholesale and retail prices for selected cities, September 1939]

Region and city	Prices		Region and city	Prices	
	Whole-sale	Retail		Whole-sale	Retail
REGION I. NEW ENGLAND			REGION V. SOUTH ATLANTIC—cont.		
A. Portland, Maine	\$11.69	\$20.00	D. Charleston, W. Va.	\$10.75	\$16.00
B. Manchester, N. H.	11.25	20.00	E. Richmond, Va.	9.38	15.00
C. Burlington, Vt.	11.25	22.00	F. Charlotte, N. C.	11.99	16.00
D. Boston, Mass.	11.25	14.00	G. Charleston, S. C.	12.26	20.00
E. Providence, R. I.	11.25	20.00	H. Atlanta, Ga.	11.46	13.50
F. Hartford, Conn.	10.81	18.00	I. Miami, Fla.	14.89	20.00
REGION II. MIDDLE ATLANTIC			REGION VI. EAST SOUTH CENTRAL		
B. Trenton, N. J.	9.70	14.00	A. Louisville, Ky.	10.35	16.00
C. Philadelphia, Pa.	9.55	13.50	B. Memphis, Tenn.	11.40	20.00
REGION III. EAST NORTH CENTRAL			D. Jackson, Miss.	13.40	20.00
A. Cleveland, Ohio.	9.60	14.00	REGION VII. WEST SOUTH CENTRAL		
B. Detroit, Mich.	10.50	14.00	A. Little Rock, Ark.	12.40	20.00
C. Indianapolis, Ind.	10.00	20.00	B. Oklahoma City, Okla.	13.40	22.50
REGION IV. WEST NORTH CENTRAL			C. Austin, Tex.	13.70	22.50
A. Minneapolis, Minn.	12.30	16.00	D. Houston, Tex.	13.70	22.10
B. Fargo, N. Dak.	14.00	23.40	E. New Orleans, La.	12.96	18.00
C. Sioux Falls, S. Dak.	13.30	22.00	REGION VIII. ROCKY MOUNTAIN		
D. Des Moines, Iowa	11.90	18.00	B. Boise, Idaho.	19.70	40.00
E. Omaha, Nebr.	12.50	19.00	C. Cheyenne, Wyo.	15.50	32.30
F. Wichita, Kans.	13.20	18.00	D. Denver, Colo.	15.70	22.00
G. St. Louis, Mo.	11.30	16.00	H. Albuquerque, N. Mex.	17.10	34.00
REGION V. SOUTH ATLANTIC			REGION IX. PACIFIC		
A. Wilmington, Del.	9.90	14.00	C. Los Angeles, Calif.	15.70	26.00
B. Baltimore, Md.	8.00	14.00			

Specification: Lime, hydrated, mason's, in paper bags; per ton.

Wholesale: Carlots, producer to retail dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 52.—*Hydrated lime*

COMPOSITE UNITED STATES AVERAGE

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January	103.0	102.7	June	101.7	103.1
February	103.0	102.7	July	105.0	103.4
March	103.0	102.7	August	105.0	103.4
April	103.2	102.7	September	105.0	103.1
May	103.8	102.7	October	105.0	103.1
June	103.9	102.7	November	105.4	103.1
July	103.9	102.4	December	106.7	103.1
August	103.9	102.4	1938		
September	103.9	102.4	January	104.8	103.1
October	103.8	102.2	February	104.8	103.1
November	103.8	102.5	March	104.8	103.1
December	103.8	102.5	April	105.1	103.1
1936			May	105.1	103.2
January	101.9	102.4	June	100.5	103.0
February	101.9	102.4	July	100.5	103.1
March	101.9	102.4	August	100.4	103.1
April	98.6	102.4	September	100.4	101.3
May	98.6	102.4	October	100.4	101.3
June	98.6	102.5	November	100.4	101.3
July	98.6	103.6	December	100.4	101.3
August	98.6	103.2	1939		
September	93.8	103.2	January	101.4	101.9
October	93.8	103.2	February	101.4	101.9
November	93.8	103.2	March	101.4	101.8
December	93.8	103.1	April	101.4	101.9
1937			May	101.4	101.9
January	101.7	103.1	June	101.4	101.9
February	101.7	103.1	July	101.3	100.0
March	101.7	103.1	August	99.3	100.0
April	101.7	103.1	September	99.4	100.0
May	101.7	103.1			

Specification: Lime, hydrated, mason's, in paper bags: per ton.

Wholesale: Carlots, producer to retail dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 53.—*Hydrated lime*

REGION I. NEW ENGLAND

[Wholesale and retail price indexes July-September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January		108.3	June		100.9
February		108.3	July		100.9
March		108.3	August		100.9
April		108.3	September		100.9
May		108.3	October		100.9
June		108.2	November		100.9
July		108.2	December		100.9
August		108.2			
September		108.2	1938		
October		108.2	January		100.9
November		108.2	February		100.9
December		108.2	March		100.9
1936			April		100.9
January		108.2	May		100.9
February		108.2	June		100.9
March		108.2	July		100.0
April		108.2	August		100.0
May		108.2	September		100.0
June		108.2	October		100.0
July		108.2	November		100.0
August		108.2	December		100.0
September		108.2			
October		108.2	1939		
November		108.2	January		100.0
December		108.2	February		100.0
1937			March		100.0
January		100.9	April		100.0
February		100.9	May		100.0
March		100.9	June		100.0
April		100.9	July		100.0
May		100.9	August		100.0
			September		100.0

Specifications: Lime, hydrated, mason's, in paper bags; per ton.

Wholesale: Carlots, producer to retail dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 54.—*Hydrated lime*

REGION II. MIDDLE ATLANTIC

[Wholesale and retail price indexes—July–September 1939=100]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	104.9	107.9	June.....	98.1	107.9
February.....	104.9	107.9	July.....	103.3	107.9
March.....	104.9	107.9	August.....	103.3	107.9
April.....	104.9	107.9	September.....	103.3	107.9
May.....	106.0	107.9	October.....	103.3	107.9
June.....	106.0	107.9	November.....	103.3	107.9
July.....	106.0	107.9	December.....	105.3	107.9
August.....	106.0	107.9			
September.....	106.0	107.9	1938		
October.....	106.0	107.9	January.....	105.3	107.9
November.....	106.0	107.9	February.....	105.3	107.9
December.....	106.0	107.9	March.....	105.3	107.9
			April.....	105.3	107.9
1936			May.....	105.3	108.1
January.....	106.0	107.9	June.....	94.9	108.1
February.....	106.0	107.9	July.....	94.9	108.1
March.....	106.0	107.9	August.....	94.9	108.1
April.....	98.7	107.9	September.....	94.9	104.2
May.....	98.7	107.9	October.....	94.9	104.2
June.....	98.7	107.9	November.....	94.9	104.2
July.....	98.7	107.9	December.....	94.9	104.2
August.....	98.7	107.9			
September.....	88.2	107.9	1939		
October.....	88.2	107.9	January.....	99.9	104.2
November.....	88.2	107.9	February.....	99.9	104.2
December.....	88.2	107.9	March.....	99.9	104.2
			April.....	99.9	104.2
1937			May.....	99.9	104.2
January.....	98.1	107.9	June.....	99.9	104.2
February.....	98.1	107.9	July.....	99.9	100.0
March.....	98.1	107.9	August.....	99.9	100.0
April.....	98.1	107.9	September.....	100.2	100.0
May.....	98.1	107.9			

Specifications: Lime, hydrated, mason's, in paper bags; per ton.

Wholesale: Carlots, producer to retail dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 55.—*Hydrated lime*

REGION III. EAST NORTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	97.3	100.3	June.....	97.3	100.0
February.....	97.3	100.3	July.....	97.3	100.0
March.....	97.3	100.3	August.....	97.3	100.0
April.....	98.6	100.3	September.....	97.3	100.0
May.....	98.6	100.3	October.....	97.3	100.0
June.....	98.7	100.3	November.....	99.0	100.0
July.....	98.7	98.9	December.....	101.7	100.0
August.....	98.7	98.9	1938		
September.....	98.7	98.9	January.....	101.7	100.0
October.....	98.7	97.4	February.....	101.7	100.0
November.....	98.7	99.2	March.....	101.7	100.0
December.....	98.7	99.2	April.....	101.7	100.0
1936			May.....	101.7	100.0
January.....	98.7	99.2	June.....	101.7	98.8
February.....	98.7	99.2	July.....	101.7	98.8
March.....	98.7	99.2	August.....	101.1	98.8
April.....	98.7	99.2	September.....	101.1	98.8
May.....	98.7	99.2	October.....	101.1	98.8
June.....	98.7	99.2	November.....	101.1	98.8
July.....	98.7	99.2	December.....	101.1	98.8
August.....	98.7	99.2	1939		
September.....	98.7	99.2	January.....	101.1	98.8
October.....	98.7	99.2	February.....	101.1	99.1
November.....	98.7	99.2	March.....	101.1	99.1
December.....	98.7	98.9	April.....	101.1	100.0
1937			May.....	101.1	100.0
January.....	97.3	99.7	June.....	101.1	100.0
February.....	97.3	99.7	July.....	100.0	100.0
March.....	97.3	100.0	August.....	100.0	100.0
April.....	97.3	100.0	September.....	100.0	100.0
May.....	97.3	100.0			

Specification: Lime, hydrated, mason's, in paper bags; per ton.

Wholesale: Carlots, producer to retail dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 56.—*Hydrated lime*

REGION IV. WEST NORTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	88.3	110.1	July.....	97.2	100.1
February.....	88.3	110.1	August.....	97.2	100.1
March.....	88.3	110.1	September.....	97.2	100.1
April.....	88.3	110.1	October.....	97.2	100.1
May.....	91.4	110.1	November.....	97.8	100.1
June.....	93.0	110.1	December.....	97.8	100.1
July.....	93.0	110.1	1938		
August.....	93.0	110.1	January.....	98.1	100.1
September.....	93.0	110.1	February.....	98.1	100.1
October.....	92.8	110.1	March.....	98.1	100.1
November.....	92.8	110.1	April.....	99.7	100.1
December.....	92.8	110.1	May.....	99.7	100.1
1936			June.....	100.0	100.1
January.....	92.8	110.3	July.....	100.0	100.1
February.....	92.8	110.3	August.....	100.0	100.1
March.....	92.8	110.3	September.....	100.0	100.1
April.....	93.4	110.3	October.....	100.0	100.1
May.....	93.4	110.3	November.....	100.0	100.1
June.....	93.4	111.1	December.....	100.0	100.1
July.....	93.4	111.1	1939		
August.....	93.4	100.1	January.....	100.0	100.0
September.....	94.9	100.1	February.....	100.0	100.0
October.....	94.9	100.1	March.....	100.0	100.0
November.....	94.9	100.1	April.....	100.0	100.0
December.....	94.9	100.1	May.....	100.0	100.0
1937			June.....	100.0	100.0
January.....	93.8	100.1	July.....	100.0	100.0
February.....	93.8	100.1	August.....	100.0	100.0
March.....	93.8	100.1	September.....	100.0	100.0
April.....	93.8	100.1			
May.....	93.8	100.1			
June.....	93.8	100.1			

Specification: Lime, hydrated, mason's, in paper bags; per ton.

Wholesale: Carlots, producer to retail dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 57.—*Hydrated lime*

REGION V. SOUTH ATLANTIC

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	110.7	102.0	July.....	124.3	101.3
February.....	110.7	102.0	August.....	124.3	101.3
March.....	110.7	102.0	September.....	124.3	101.3
April.....	110.7	102.0	October.....	124.3	101.3
May.....	110.7	102.0	November.....	124.3	101.3
June.....	110.7	102.0	December.....	124.3	101.3
July.....	110.7	102.0	1938		
August.....	110.7	102.0	January.....	109.4	100.9
September.....	110.7	102.0	February.....	109.4	100.9
October.....	110.7	102.0	March.....	109.4	100.9
November.....	110.7	102.0	April.....	109.4	100.9
December.....	110.7	102.0	May.....	109.4	100.9
1936			June.....	109.2	100.9
January.....	95.7	101.3	July.....	109.2	100.9
February.....	95.7	101.3	August.....	109.2	100.9
March.....	95.7	101.3	September.....	109.2	100.9
April.....	95.7	101.3	October.....	109.2	100.9
May.....	95.7	101.3	November.....	109.2	100.9
June.....	95.7	101.3	December.....	109.2	100.9
July.....	95.7	101.3	1939		
August.....	95.7	101.3	January.....	100.0	100.4
September.....	95.5	101.3	February.....	100.0	100.4
October.....	95.5	101.3	March.....	100.0	100.4
November.....	95.5	101.3	April.....	100.0	100.4
December.....	95.5	101.3	May.....	100.0	100.4
1937			June.....	100.0	100.0
January.....	124.2	101.3	July.....	100.0	100.0
February.....	124.2	101.3	August.....	100.0	100.0
March.....	124.2	101.3	September.....	100.0	100.0
April.....	124.2	101.3			
May.....	124.2	101.3			
June.....	124.2	101.3			

Specification: Lime, hydrated, mason's, in paper bags; per ton.

Wholesale: Carlots, producer to retail dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 58.—*Hydrated lime*

REGION VI. EAST SOUTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....		104.4	June.....		104.4
February.....		104.4	July.....		104.4
March.....		104.4	August.....		104.4
April.....		104.4	September.....		104.4
May.....		104.4	October.....		104.4
June.....		104.4	November.....		104.4
July.....		104.4	December.....		104.4
August.....		104.4			
September.....		104.4	1938		
October.....		104.4	January.....	100.8	104.4
November.....		104.4	February.....	100.8	104.4
December.....		104.4	March.....	100.8	104.4
1936			April.....	100.8	104.4
January.....		104.4	May.....	100.8	104.4
February.....		104.4	June.....	100.8	104.4
March.....		104.4	July.....	100.8	104.4
April.....		104.4	August.....	100.8	104.4
May.....		104.4	September.....	100.8	104.4
June.....		104.4	October.....	100.8	104.4
July.....		104.4	November.....	100.8	104.4
August.....		104.4	December.....	100.8	104.4
September.....		104.4			
October.....		104.4	1939		
November.....		104.4	January.....	100.8	100.0
December.....		104.4	February.....	100.8	100.0
1937			March.....	100.8	100.0
January.....		104.4	April.....	100.8	100.0
February.....		104.4	May.....	100.8	100.0
March.....		104.4	June.....	100.8	100.0
April.....		104.4	July.....	100.8	100.0
May.....		104.4	August.....	100.8	100.0
			September.....	99.0	100.0

Specification: Lime, hydrated, mason's, in paper bags; per ton.

Wholesale: Carlots, producer to retail dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 59.—*Hydrated lime*

REGION VII. WEST SOUTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January	100.1	100.0	June	99.4	100.0
February	100.1	100.0	July	99.4	100.0
March	100.1	100.0	August	99.4	100.0
April	100.1	100.0	September	99.4	100.0
May	98.9	100.0	October	99.4	100.0
June	99.0	100.0	November	100.1	100.0
July	99.0	100.0	December	100.1	100.0
August	99.0	100.0			
September	99.0	100.0	1938		
October	98.9	100.0	January	100.1	100.0
November	98.9	100.0	February	100.1	100.0
December	98.9	100.0	March	100.1	100.0
1936			April	100.1	100.0
January	98.9	100.0	May	100.1	100.0
February	98.9	100.0	June	101.0	100.0
March	98.9	100.0	July	101.0	100.0
April	98.9	100.0	August	101.0	100.0
May	98.9	100.0	September	101.0	100.0
June	98.9	100.0	October	101.0	100.0
July	98.9	100.0	November	101.0	100.0
August	98.9	100.0	December	100.0	100.0
September	98.9	100.0			
October	98.9	100.0	1939		
November	98.9	100.0	January	100.0	100.0
December	98.9	100.0	February	100.0	100.0
1937			March	100.0	100.0
January	99.4	100.0	April	100.0	100.0
February	99.4	100.0	May	100.0	100.0
March	99.4	100.0	June	100.0	100.0
April	99.4	100.0	July	100.0	100.0
May	99.4	100.0	August	100.0	100.0
			September	100.0	100.0

Specification: Lime, hydrated, mason's, in paper bags; per ton.

Wholesale: Carlots, producer to retail dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 60.—*Hydrated lime*

REGION VIII. ROCKY MOUNTAIN

[Wholesale and retail price indexes—July-September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole sale	Retail
1935			1937—Continued		
January.....	98.6	98.8	June.....	97.7	99.9
February.....	98.6	98.8	July.....	97.3	99.9
March.....	98.6	98.8	August.....	95.7	99.9
April.....	98.6	98.8	September.....	95.7	99.9
May.....	98.7	98.8	October.....	95.7	99.9
June.....	98.7	98.8	November.....	97.1	99.9
July.....	98.7	98.8	December.....	97.1	99.9
August.....	98.7	98.8	1938		
September.....	98.7	98.8	January.....	97.1	101.0
October.....	98.5	98.8	February.....	97.1	101.0
November.....	98.5	98.8	March.....	97.1	101.0
December.....	98.5	98.8	April.....	99.5	101.0
1936			May.....	99.5	100.0
January.....	98.5	98.9	June.....	99.5	100.0
February.....	98.5	98.9	July.....	99.5	100.0
March.....	98.5	99.9	August.....	99.5	100.0
April.....	98.5	99.9	September.....	99.5	100.0
May.....	98.5	99.9	October.....	99.5	100.0
June.....	98.5	99.9	November.....	99.5	100.0
July.....	98.5	99.9	December.....	99.5	100.0
August.....	98.5	99.9	1939		
September.....	98.5	99.9	January.....	100.0	100.0
October.....	98.5	99.9	February.....	100.0	100.0
November.....	98.5	99.9	March.....	100.0	100.0
December.....	98.5	99.9	April.....	100.0	100.0
1937			May.....	100.0	100.0
January.....	97.7	99.9	June.....	100.0	100.0
February.....	97.7	99.9	July.....	100.0	100.0
March.....	97.7	99.9	August.....	100.0	100.0
April.....	97.7	99.9	September.....	100.0	100.0
May.....	97.7	99.9			

Specification: Lime, hydrated, mason's, in paper bags; per ton.

Wholesale: Carlots, producer to retail dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 61.—*Hydrated lime*

REGION IX, PACIFIC

[Wholesale and retail price indexes—July-September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	103.3	85.1	June.....	103.3	94.8
February.....	103.3	85.1	July.....	109.6	96.7
March.....	103.3	85.1	August.....	109.6	96.7
April.....	103.3	85.1	September.....	109.6	94.5
May.....	103.3	85.1	October.....	109.6	94.5
June.....	103.3	85.1	November.....	109.6	94.5
July.....	103.3	85.1	December.....	109.6	94.5
August.....	103.3	85.1	1938		
September.....	103.3	85.1	January.....	109.6	94.5
October.....	103.3	85.1	February.....	109.6	94.5
November.....	103.3	85.1	March.....	109.6	94.5
December.....	103.3	85.1	April.....	110.8	94.5
1936			May.....	110.8	94.5
January.....	103.3	85.1	June.....	110.8	94.5
February.....	103.3	85.1	July.....	110.8	94.5
March.....	103.3	85.1	August.....	110.8	94.5
April.....	103.3	85.1	September.....	110.8	94.5
May.....	103.3	85.1	October.....	110.8	94.5
June.....	103.3	85.1	November.....	110.8	94.5
July.....	103.3	94.8	December.....	110.8	94.5
August.....	103.3	94.8	1939		
September.....	103.3	94.8	January.....	110.8	101.0
October.....	103.3	94.8	February.....	110.8	101.0
November.....	103.3	94.8	March.....	110.8	100.0
December.....	103.3	94.8	April.....	110.8	100.0
1937			May.....	110.8	100.0
January.....	103.3	94.8	June.....	110.8	100.0
February.....	103.3	94.8	July.....	110.8	100.0
March.....	103.3	94.8	August.....	94.6	100.0
April.....	103.3	94.8	September.....	94.6	100.0
May.....	103.3	94.8			

Specification: Lime, hydrated, mason's, in paper bags; per ton.

Wholesale: Carlots, producer to retail dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

CHAPTER VIII

PAINTS AND VARNISHES

DESCRIPTION OF THE INDUSTRY

The value of production of paints, varnishes, and related products was \$454,000,000 for the year 1937. Of this total, ready-mixed paints represented \$164,000,000, varnishes \$65,000,000, and enamels \$75,000,000.¹ The corresponding values for the year 1929 were \$452,000,000, \$178,000,000, \$72,000,000, and \$40,000,000, respectively.²

Census data published for 1937 showed 1,124 manufacturing plants for this industry,³ as compared with 1,063 plants in 1929. The plants were scattered over 40 States but 8 States produced 81 percent of the total output. These States in order of importance are New Jersey, Illinois, New York, Ohio, Michigan, Pennsylvania, California, and Missouri. With the exception of California, the production is centered in the Great Lakes and East North Central regions. Map IV illustrates this concentration, showing the States which produced 5 percent or more of the industry total. The geographical distribution of the value of products in 1937 follows:

TABLE 62.—*Geographical distribution of production*

State	Value of product ¹	Percent of total	State	Value of product ¹	Percent of total
New Jersey.....	\$88,830,262	17	Missouri.....	\$27,768,739	5
Illinois.....	79,945,742	15	Wisconsin.....	12,605,381	2
New York.....	62,408,117	12	Indiana.....	12,315,308	2
Ohio.....	54,918,984	10	Kentucky.....	12,264,914	2
Michigan.....	48,224,221	9	Maryland.....	11,530,585	2
Pennsylvania.....	43,556,966	8	Massachusetts.....	11,526,697	2
California.....	33,532,796	6	Other States (28).....		8

¹ Census of Manufactures: 1937, Part I. "Paints, pigments, and varnishes" table 2, p. 728.

Although there are a large number of companies engaged in the production of paints, pigments, and varnishes, a few very large corporations account for a substantial portion of the total output. Department of Commerce statistics show the highest concentration for enamel, with the four largest companies producing 59 percent of the total. For mixed paints, the percentage is 33, and for varnishes 29 percent.

In addition to mixed paints, enamels, and varnishes, some of the more important items produced in the industry are paste paints, white and red lead in oil and dry, water paints, stains, lacquers, fillers, shellac, dry colors and pigments, whiting, litharge, lithopone, zinc oxide, tita-

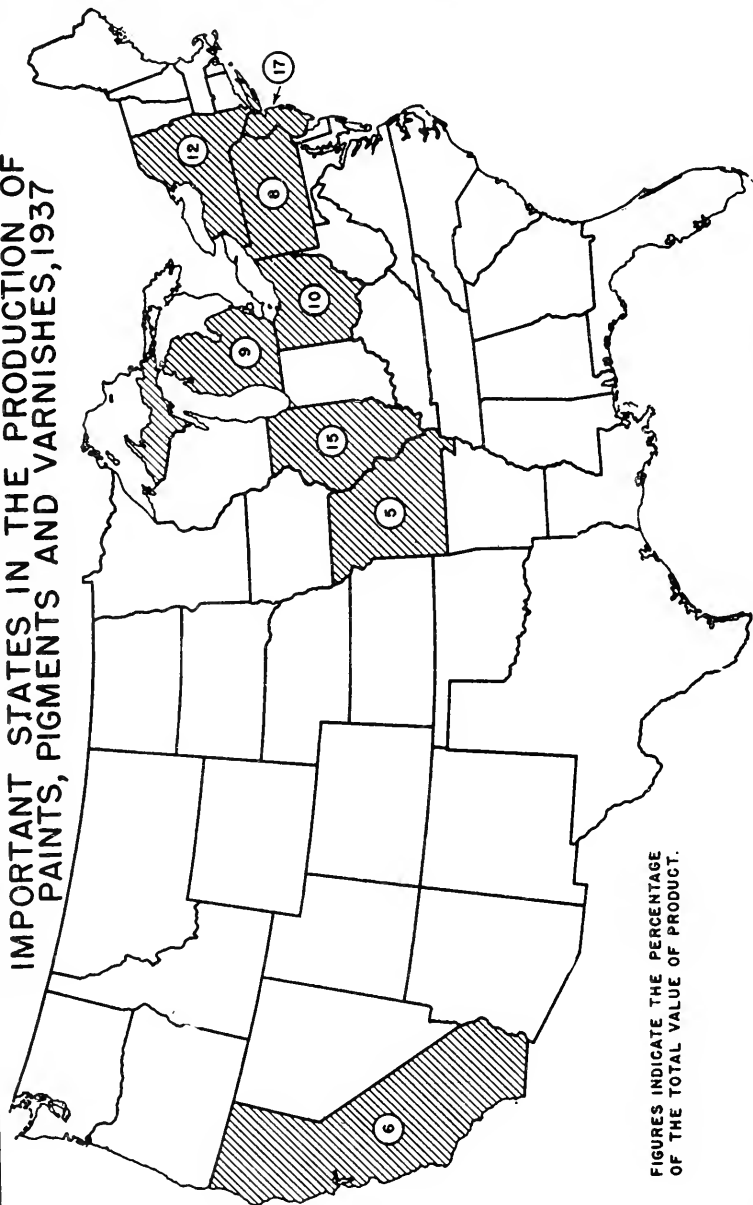
¹ Census of Manufactures: 1937, Paints, varnishes, and related products, table 4, p. 730.

² Census of Manufactures: 1929. "Paints and varnishes" products by kind and quality, table 3, p. 720.

Total value obtained by subtracting value of "pigments" from "all products."

³ Including pigments.

MAP IV

IMPORTANT STATES IN THE PRODUCTION OF
PAINTS, PIGMENTS AND VARNISHES, 1937FIGURES INDICATE THE PERCENTAGE
OF THE TOTAL VALUE OF PRODUCT.

mium oxide, and other oxides used in the industry and for sale. The products priced for this survey were—

Paint: Ready-mixed, first quality, in gallon cans:

Outside white, gloss.

Inside white, flat.

Enamel: Interior, white, quick-drying, gloss, first quality.

Varnish: Interior, first quality.

Wholesale prices obtained were per gallon, producer to retail dealer, f. o. b. cars destination, in less-than-carlot quantities. Retail prices were per gallon, dealer to contractor, delivered to job site, city.

PRICE STRUCTURE

The wholesale price of ready-mixed paints is largely a matter of administrative determination, and different methods are used by the different firms in the industry. Management weighs innumerable factors, such as costs of production and distribution, known or rumored prices of competitors, type of paint needed in the locality, etc., and sets up a list or lists with specified volume, trade, and cash discounts. Departures from the trade lists are relatively rare, except when prices may be reduced in order to secure the order for a large job. Approximately 40 percent of the products of the paint industry are sold to industrial or other large users and it is likely that the price trends and levels are not the same as those on sales to the small home-building or repair trade. The organized buying power of large purchasers gives them a decided advantage in price over the average customer.

Zone Delivered Prices.

Common practice for large manufacturers selling Nation-wide is to divide the area into zones, and to quote delivered prices, full freight allowed, to every "distribution center" included in each zone. "Distribution centers" are cities selected by the manufacturer, in each zone, for the location of a warehouse or a factory. Delivery is made to any point in these cities without extra charge. When sales are made in a locality having no warehouse, shipment is made from the nearest warehouse, freightwise, and the buyer pays the freight costs. Warehouse locations are selected by each large manufacturer and not all firms use the same distribution centers. However, if any paint manufacturer has a factory or warehouse in a locality this point is considered a distribution center for all companies who sell there, freight being equalized with the nearest competitive distribution point. One large manufacturer reported that all the cities included in this survey were distribution centers for his firm.

The zones, wherein delivered prices at jobbing centers are uniform, are not the same for all firms. The zones for each of the firms with Nation-wide distribution follow a general pattern to a certain extent. The base zone includes the States in the Middle Atlantic and East North Central areas; the second zone, the States around the edge of the base zone, and in some cases all the South Atlantic and New England States; and the third zone, the remainder of the south and southwest areas and part of the West North Central. Zone four is usually the Rocky Mountain States. The three States on the west coast are not included in the fourth zone. Because factories are

located there, the west coast States are usually considered a base or first zone, but certain manufacturers place them in the second or third zones.

The difference in base prices between zones is usually 5 to 7 cents per gallon. That is, zone 2 would be 5 cents above zone 1; zone 3, 10 cents above; and zone 4, 15 cents above, etc. The differential between these warehouse prices by zones varies with the different producers, and occasionally varies between the different liquid paint products.

Some medium-sized producers quote prices f. o. b. destination, with full freight allowed or freight prepaid. The usual minimum shipment under this plan is 100 pounds. These producers sell on what approximates a regional basis, and by the above methods achieve uniform delivered costs at every destination in their sales area.

Some small plants quote a straight f. o. b. plant price and make no attempt to equalize delivery costs. Companies using this method usually have a small sales area.

Of the 29 manufacturers from whom prices were obtained for this survey, 7 have multiple bases or zones with freight allowed in each zone, 17 use one base price with full freight allowed to every destination, and 5 quote prices f. o. b. plant with no freight allowance.

Channels of Distribution.

There is no uniform method of distribution established in the paint industry. The size and importance of the producer and his volume of sales determine to a considerable extent the system used in the distribution of the product. Many of the smaller manufacturers distribute a large part of their volume direct to the retail outlet. On the other hand, the largest manufacturers generally sell their products to both company-owned and independent wholesale distributors. These concerns, located at strategic points, stock large quantities of paints and serve as the manufacturer's representatives in their regions. The distributor sells to the dealers and jobbers who in turn service the retail outlets, hardware stores, etc., the paint contractors, as well as the general trade.

According to information developed by American Paint Journal, Inc., the chief source of supply for the painter is the retail store. In a survey of 5,500 painting contractors, the following distribution of purchases was revealed: 66 percent buy exclusively from retail dealers and 12 percent buy exclusively from manufacturers; 75 percent buy wholly or in part from retail dealers and 20 percent buy wholly or in part from manufacturers.⁴

Method of Pricing.

Paint manufacturers do not, in general, attempt to set the retail price to either the individual consumer or to the painter. Some manufacturers "suggest" a retail price or publish retail lists, but it is reported that there is considerable deviation from these lists at retail.

The paint manufacturer operates primarily from one or more price lists. He sells exclusively, or to all, or to combinations of the following classes of buyers: "Regional distributors;" wholesalers, dealers, and jobbers; retailers; painting contractors; and over-the-counter trade in his own retail stores. One practice is to publish a list of retail

⁴ Data prepared by Mr. H. A. Nagel, research director, American Paint Journal Co.

buyers and announce discounts to the various types of distributors off the retail price. Other methods involve the publishing of several lists of which the following are examples:

- (1) List to the retailer: 10 percent off to jobber.
- (2) List to the consumer trade: 25 percent off to retail dealer.
- (3) List to the dealer.
- (4) List to the consumer trade:
20 percent off to dealer.
20 percent and 12½ percent off to jobber.

One large manufacturer has in effect the following range of prices on his product:

	<i>Per gallon</i>
Trade.....	\$3. 70
Painter.....	3. 33
Dealer.....	2. 60
Distributor.....	1. 95

On the basis of these prices, the distributor receives on sales to dealers 25 percent, to painters 41 percent, and direct-to-the-trade 47 percent. The dealer has a working margin of 30 percent on sales to the retail consumers and 22 percent on sales to painters.⁵

Quantity and Other Discounts.

Volume and quantity discount practices are not uniform among the manufacturers. Certain producers maintain a complex structure of discounts based on quantities sold. Others have a uniform discount on all purchases. The trend during the last 5 years, however, has been away from the quantity discount plan in favor of a straight discount on all purchases. The Robinson-Patman Act of 1936 was, of course, a primary factor in changing the volume discount structures.

The quantity and volume discount practices described below for two large manufacturers exemplify the changes which have taken place in the industry over the last few years. Prior to 1936, one of these companies had a profit-sharing scheme which amounted in reality to volume discounts. Up to that time dealers were given a sliding scale of discounts for volume purchased in a period of 1 year. (Average discounts amounted to between 6 and 7½ percent.) Paints were sold to the dealers at net prices less only the cash discount. In December of 1936 the company interpreted the Robinson-Patman Act as outlawing the profit-sharing arrangement and it was discontinued. In its place, order-quantity discounts were allowed to dealers. For instance, a dealer purchasing in one order for shipment at one time and to one destination, a quantity of 11 gallons or less, received no discount; from 12 to 35 inclusive, 5 per cent was allowed; there was a sliding scale of reductions up to a maximum of 10 percent which was granted on orders of 84 gallons or more. (The company estimates that the average discount for quantity given on all dealers' purchases under this arrangement was 7½ percent.) In October 1939, the company changed from the order-quantity to the regular list price less a flat 10 percent.

Another large company, prior to January 1938, quoted net prices to all dealers and gave annual rebates on a sliding scale, according to

⁵ These percentages are computed from the selling price in each case.

the volume of purchases. On that date, the company started quoting order discounts as follows:

Quantity	Discount (percent)	Quantity	Discount (percent)
Less than 24 gallons	0	84 gallons and over	10
24 to 47 gallons	6	Carlots	14
48 to 83 gallons	8		

Dealers operating as distributors ordinarily received a functional discount of from 7½ to 10 percent on the quantity bought for resale to other dealers. In September 1939 the order discount plan was discarded for a volume discount arrangement. Figured on a 3-year average, dealers whose annual purchases amount to less than \$500 receive a 5 percent discount. Dealers whose purchases total more than \$500 are eligible for two 5 percent discounts. Carlot buyers receive an additional 5 percent.

The usual payment terms are 2 percent discount for cash in either 10 days or by 10th proximo, net either 30 or 60 days.

Paint prices are subject to change without notice. The manufacturer does not guarantee the level of future prices, as is done in certain other industries. Sales generally are made for spot or prompt delivery.

PRICE LEVELS AND TRENDS

Paint is a relatively unstandardized commodity, produced by a large number of manufacturers, and wholesale price levels are not the same for all companies. Due to the zone system, any change in base price by a producer selling throughout the country automatically changes the price by the same amount anywhere in the United States. However, a change in freight rates may affect the price in non-warehouse cities when the base price is unchanged. The large manufacturers do not, as a rule, change prices simultaneously, and the smaller manufacturers may or may not vary prices in line with the larger firms.

OUTSIDE PAINT

For outside paint, wholesale price levels and trends were similar in the nine regions of the United States from January 1935, through September 1939. (See chart IX and tables 63 to 72.) Prices were steady from the beginning of 1935 through August 1939, except for a period of 4 months, December 1936, and January, February, and March 1937, when prices averaged about 8 percent lower. In September 1939 there was a decline of about 7 percent. These are the only major changes affecting the price level for the period. The changes are reflected in index numbers of paint prices in which the base period is the average price prevailing in the third quarter of 1939.

Throughout most of the period 1935–September 1939, the price index was at 103 percent of this average.

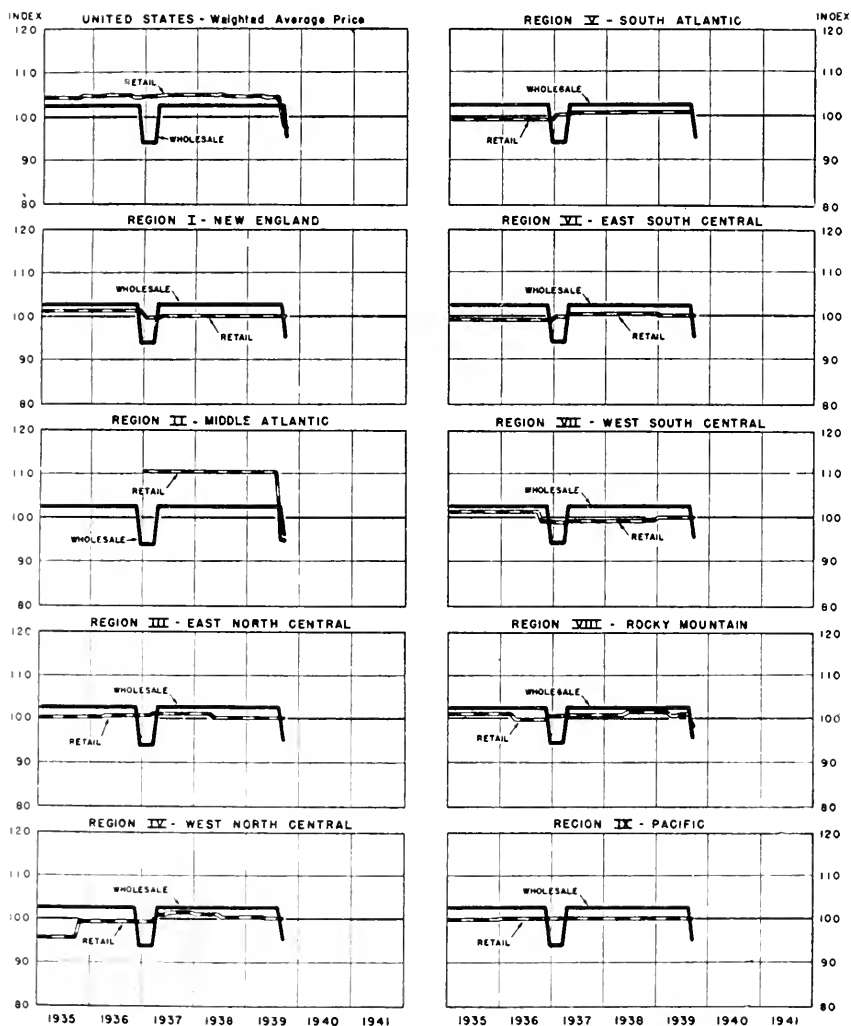
Retail prices for outside paint were not as constant as wholesale prices and differed in various regions to a greater extent. On the whole, however, they varied within narrow margins. In certain regions there were only minor price fluctuations and there was no significant response in any part of the country to the dip in wholesale prices which occurred at the beginning of 1937.

CHART IX

OUTSIDE HOUSE PAINT

WHOLESALE AND RETAIL PRICE INDEXES

JULY - SEPTEMBER 1939 = 100



From 1935 to September 1939, prices varied within a range of 2 percent in the South Atlantic and East South Central States, and on the Pacific coast. Four other regions—New England, the East North Central, West South Central, and Rocky Mountain—changed less than 3 percent, with minor fluctuations. Changes were most frequent in the West North Central States, where there was a sharp rise in October 1935 from a level somewhat below that in other parts of the country, and a succession of fractional advances in 1937, followed by declines in 1938 and 1939. In most regions the wholesale price drop in September 1939 was not immediately reflected in retail prices.

With regard to the comparative levels of wholesale and retail prices, wholesale paint prices in 1935 were about 3 percent above the level of late 1939. At retail, in four of the nine regions paint was selling at an average below the level of late 1939 (less than 1 percent below except in the West North Central where it was 4 percent below) while in the remaining five regions it was selling slightly above that level. The third quarter of 1939 is the base period used in the Bureau of Labor Statistics' indexes of building material prices presented in chart IX and tables 63 to 72.

TABLE 63.—*Outside house paint*
COMPOSITE UNITED STATES AVERAGE

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	102.6	104.3	June.....	102.6	104.9
February.....	102.6	104.3	July.....	102.6	104.9
March.....	102.6	104.3	August.....	102.6	104.9
April.....	102.6	104.3	September.....	102.6	104.9
May.....	102.6	104.3	October.....	102.6	104.9
June.....	102.6	104.3	November.....	102.6	104.9
July.....	102.6	104.3	December.....	102.6	104.9
August.....	102.6	104.3	1938		
September.....	102.6	104.3	January.....	102.6	104.9
October.....	102.6	104.6	February.....	102.6	104.9
November.....	102.6	104.6	March.....	102.6	104.9
December.....	102.6	104.6	April.....	102.6	104.9
1936			May.....	102.6	104.7
January.....	102.6	104.6	June.....	102.6	104.8
February.....	102.6	104.6	July.....	102.6	104.7
March.....	102.6	104.6	August.....	102.6	104.7
April.....	102.6	104.7	September.....	102.6	104.7
May.....	102.6	104.7	October.....	102.6	104.7
June.....	102.6	104.7	November.....	102.6	104.7
July.....	102.6	104.7	December.....	102.6	104.7
August.....	102.6	104.7	1939		
September.....	102.6	104.7	January.....	102.6	104.8
October.....	102.6	104.4	February.....	102.6	104.8
November.....	102.6	104.4	March.....	102.6	104.8
December.....	94.0	104.5	April.....	102.6	104.7
1937			May.....	102.6	104.7
January.....	94.0	104.7	June.....	102.6	104.7
February.....	94.0	104.7	July.....	102.6	104.7
March.....	94.0	104.7	August.....	102.6	97.8
April.....	102.6	104.8	September.....	95.3	97.4
May.....	102.6	104.9			

Specification: Paint, outside, white, gloss, mixed, first quality; per gallon in gallon cans.

Wholesale: Manufacturer to wholesale dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 64.—*Outside house paint*

REGION I. NEW ENGLAND

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	102.6	101.2	June.....	102.6	100.0
February.....	102.6	101.2	July.....	102.6	100.0
March.....	102.6	101.2	August.....	102.6	100.0
April.....	102.6	101.2	September.....	102.6	100.0
May.....	102.6	101.2	October.....	102.6	100.0
June.....	102.6	101.2	November.....	102.6	100.0
July.....	102.6	101.2	December.....	102.6	100.0
August.....	102.6	101.2			
September.....	102.6	101.2	1938		
October.....	102.6	101.2	January.....	102.6	100.0
November.....	102.6	101.2	February.....	102.6	100.0
December.....	102.6	101.2	March.....	102.6	100.0
1936			April.....	102.6	100.0
January.....	102.6	101.2	May.....	102.6	100.0
February.....	102.6	101.2	June.....	102.6	100.0
March.....	102.6	101.2	July.....	102.6	100.0
April.....	102.6	101.2	August.....	102.6	100.0
May.....	102.6	101.2	September.....	102.6	100.0
June.....	102.6	101.2	October.....	102.6	100.0
July.....	102.6	101.2	November.....	102.6	100.0
August.....	102.6	101.2	December.....	102.6	100.0
September.....	102.6	101.2			
October.....	102.6	101.2	1939		
November.....	102.6	101.2	January.....	102.6	100.0
December.....	94.0	101.2	February.....	102.6	100.0
1937			March.....	102.6	100.0
January.....	94.0	99.7	April.....	102.6	100.0
February.....	94.0	99.7	May.....	102.6	100.0
March.....	94.0	99.7	June.....	102.6	100.0
April.....	102.6	99.7	July.....	102.6	100.0
May.....	102.6	100.0	August.....	102.6	100.0
			September.....	95.3	100.0

Specification: Paint, outside, white, gloss, mixed, first quality; per gallon in gallon cans.

Wholesale: Manufacturer to wholesale dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 65.—*Outside house paint*

REGION II. MIDDLE ATLANTIC

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole- sale	Retail		Whole- sale	Retail
1935			1937—Continued		
January.....	102.6		June.....	102.6	110.5
February.....	102.6		July.....	102.6	110.5
March.....	102.6		August.....	102.6	110.5
April.....	102.6		September.....	102.6	110.5
May.....	102.6		October.....	102.6	110.5
June.....	102.6		November.....	102.6	110.5
July.....	102.6		December.....	102.6	110.5
August.....	102.6				
September.....	102.6		1938		
October.....	102.6		January.....	102.6	110.5
November.....	102.6		February.....	102.6	110.5
December.....	102.6		March.....	102.6	110.5
			April.....	102.6	110.5
1936			May.....	102.6	110.5
January.....	102.6		June.....	102.6	110.5
February.....	102.6		July.....	102.6	110.5
March.....	102.6		August.....	102.6	110.5
April.....	102.6		September.....	102.6	110.5
May.....	102.6		October.....	102.6	110.5
June.....	102.6		November.....	102.6	110.5
July.....	102.6		December.....	102.6	110.5
August.....	102.6				
September.....	102.6		1939		
October.....	102.6		January.....	102.6	110.5
November.....	102.6		February.....	102.6	110.5
December.....	93.9		March.....	102.6	110.5
			April.....	102.6	110.5
1937			May.....	102.6	110.5
January.....	93.9	110.5	June.....	102.6	110.5
February.....	93.9	110.5	July.....	102.6	110.5
March.....	93.9	110.5	August.....	102.6	94.8
April.....	102.6	110.5	September.....	95.2	94.7
May.....	102.6	110.5			

Specification: Paint, outside, white, gloss, mixed, first quality; per gallon in gallon cans.

Wholesale: Manufacturer to wholesale dealer, f. o. b. cars' destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 66.—*Outside house paint*

REGION III. EAST NORTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	102.6	100.2	June.....	102.6	101.1
February.....	102.6	100.2	July.....	102.6	101.1
March.....	102.6	100.2	August.....	102.6	101.1
April.....	102.6	100.2	September.....	102.6	101.1
May.....	102.6	100.2	October.....	102.6	101.1
June.....	102.6	100.2	November.....	102.6	101.1
July.....	102.6	100.2	December.....	102.6	101.1
August.....	102.6	100.2	1938		
September.....	102.6	100.2	January.....	102.6	101.1
October.....	102.6	100.2	February.....	102.6	101.1
November.....	102.6	100.2	March.....	102.6	101.1
December.....	102.6	100.2	April.....	102.6	101.1
1936			May.....	102.6	100.0
January.....	102.6	100.2	June.....	102.6	100.0
February.....	102.6	100.2	July.....	102.6	100.0
March.....	102.6	100.2	August.....	102.6	100.0
April.....	102.6	100.7	September.....	102.6	100.0
May.....	102.6	100.7	October.....	102.6	100.0
June.....	102.6	100.7	November.....	102.6	100.0
July.....	102.6	100.7	December.....	102.6	100.0
August.....	102.6	100.7	1939		
September.....	102.6	100.7	January.....	102.6	100.0
October.....	102.6	100.7	February.....	102.6	100.0
November.....	102.6	100.7	March.....	102.6	100.0
December.....	93.9	100.7	April.....	102.6	100.0
1937			May.....	102.6	100.0
January.....	93.9	100.7	June.....	102.6	100.0
February.....	93.9	100.7	July.....	102.6	100.0
March.....	93.9	101.1	August.....	102.6	100.0
April.....	102.6	101.1	September.....	95.2	100.0
May.....	102.6	101.1			

Specification: Paint, outside, white, gloss, mixed, first quality; per gallon in gallon cans.

Wholesale: Manufacturer to wholesale dealer, f. o. b. cars' destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 67.—*Outside house paint*

REGION IV. WEST NORTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	102.6	95.5	June.....	102.6	101.0
February.....	102.6	95.5	July.....	102.6	101.6
March.....	102.6	95.5	August.....	102.6	101.6
April.....	102.6	95.5	September.....	102.6	101.6
May.....	102.6	95.5	October.....	102.6	101.6
June.....	102.6	95.5	November.....	102.6	101.6
July.....	102.6	95.5	December.....	102.6	101.6
August.....	102.6	95.5	1938		
September.....	102.6	95.5	January.....	102.6	100.9
October.....	102.6	99.3	February.....	102.6	100.9
November.....	102.6	99.3	March.....	102.6	100.9
December.....	102.6	99.3	April.....	102.6	100.9
1936			May.....	102.6	100.9
January.....	102.6	99.3	June.....	102.6	100.9
February.....	102.6	99.3	July.....	102.6	100.2
March.....	102.6	99.3	August.....	102.6	100.2
April.....	102.6	99.3	September.....	102.6	100.2
May.....	102.6	99.3	October.....	102.6	100.2
June.....	102.6	99.3	November.....	102.6	100.2
July.....	102.6	99.3	December.....	102.6	100.2
August.....	102.6	99.3	1939		
September.....	102.6	99.3	January.....	102.6	100.2
October.....	102.6	99.3	February.....	102.6	100.2
November.....	102.6	99.3	March.....	102.6	100.2
December.....	94.0	99.3	April.....	102.6	100.2
1937			May.....	102.6	100.0
January.....	94.0	99.3	June.....	102.6	100.0
February.....	94.0	99.3	July.....	102.6	100.0
March.....	94.0	99.3	August.....	102.6	100.0
April.....	102.6	101.0	September.....	95.3	100.0
May.....	102.6	101.0			

Specification: Paint, outside, white, gloss, mixed, first quality; per gallon in gallon cans.

Wholesale: Manufacturer to wholesale dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 68.—*Outside house paint*

REGION V. SOUTH ATLANTIC

[Wholesale and retail price indexes—July–September 1939=100]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	102.6	99.3	June.....	102.6	100.8
February.....	102.6	99.3	July.....	102.6	100.8
March.....	102.6	99.3	August.....	102.6	100.8
April.....	102.6	99.3	September.....	102.6	100.8
May.....	102.6	99.3	October.....	102.6	100.8
June.....	102.6	99.3	November.....	102.6	100.8
July.....	102.6	99.3	December.....	102.6	100.8
August.....	102.6	99.3			
September.....	102.6	99.3	1938		
October.....	102.6	99.3	January.....	102.6	100.8
November.....	102.6	99.3	February.....	102.6	100.8
December.....	102.6	99.3	March.....	102.6	100.8
			April.....	102.6	100.8
1936			May.....	102.6	100.8
January.....	102.6	99.3	June.....	102.6	100.8
February.....	102.6	99.3	July.....	102.6	100.8
March.....	102.6	99.3	August.....	102.6	100.8
April.....	102.6	99.3	September.....	102.6	100.8
May.....	102.6	99.3	October.....	102.6	100.8
June.....	102.6	99.3	November.....	102.6	100.8
July.....	102.6	99.3	December.....	102.6	100.8
August.....	102.6	99.3			
September.....	102.6	99.3	1939		
October.....	102.6	99.3	January.....	102.6	100.8
November.....	102.6	99.3	February.....	102.6	100.8
December.....	94.0	99.3	March.....	102.6	100.8
			April.....	102.6	100.8
1937			May.....	102.6	100.8
January.....	94.0	100.2	June.....	102.6	100.8
February.....	94.0	100.2	July.....	102.6	100.8
March.....	94.0	100.2	August.....	102.6	100.8
April.....	102.6	100.3	September.....	95.3	98.4
May.....	102.6	100.8			

Specification: Paint, outside, white, gloss, mixed, first quality; per gallon in gallon cans.

Wholesale: Manufacturer to wholesale dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 69.—*Outside house paint*

REGION VI. EAST SOUTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	102.5	99.1	June.....	102.5	100.5
February.....	102.5	99.1	July.....	102.5	100.5
March.....	102.5	99.1	August.....	102.5	100.5
April.....	102.5	99.1	September.....	102.5	100.5
May.....	102.5	99.1	October.....	102.5	100.5
June.....	102.5	99.1	November.....	102.5	100.5
July.....	102.5	99.1	December.....	102.5	100.5
August.....	102.5	99.1	1938		
September.....	102.5	99.1	January.....	102.5	100.5
October.....	102.5	99.1	February.....	102.5	100.5
November.....	102.5	99.1	March.....	102.5	100.5
December.....	102.5	99.1	April.....	102.5	100.5
1936			May.....	102.5	100.5
January.....	102.5	99.1	June.....	102.5	100.5
February.....	102.5	99.1	July.....	102.5	100.5
March.....	102.5	99.1	August.....	102.5	100.5
April.....	102.5	99.1	September.....	102.5	100.5
May.....	102.5	99.1	October.....	102.5	100.5
June.....	102.5	99.1	November.....	102.5	100.5
July.....	102.5	99.1	December.....	102.5	100.5
August.....	102.5	99.1	1939		
September.....	102.5	99.1	January.....	102.5	100.0
October.....	102.5	99.1	February.....	102.5	100.0
November.....	102.5	99.1	March.....	102.5	100.0
December.....	94.1	99.1	April.....	102.5	100.0
1937			May.....	102.5	100.0
January.....	94.1	99.8	June.....	102.5	100.0
February.....	94.1	99.8	July.....	102.5	100.0
March.....	94.1	99.8	August.....	102.5	100.0
April.....	102.5	100.5	September.....	95.3	100.0
May.....	102.5	100.5			

Specification: Paint, outside, white, gloss, mixed, first quality; per gallon in gallon cans.

Wholesale: Manufacturer to wholesale dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 70.—*Outside house paint*

REGION VII. WEST SOUTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	102.5	101.3	June.....	102.5	99.3
February.....	102.5	101.3	July.....	102.5	99.3
March.....	102.5	101.3	August.....	102.5	99.3
April.....	102.5	101.3	September.....	102.5	99.3
May.....	102.5	101.3	October.....	102.5	99.3
June.....	102.5	101.3	November.....	102.5	99.3
July.....	102.5	101.3	December.....	102.5	99.3
August.....	102.5	101.3	1938		
September.....	102.5	101.3	January.....	102.5	99.3
October.....	102.5	101.3	February.....	102.5	99.3
November.....	102.5	101.3	March.....	102.5	99.3
December.....	102.5	101.3	April.....	102.5	99.3
1936			May.....	102.5	99.3
January.....	102.5	101.3	June.....	102.5	99.3
February.....	102.5	101.3	July.....	102.5	99.3
March.....	102.5	101.3	August.....	102.5	99.3
April.....	102.5	101.3	September.....	102.5	99.3
May.....	102.5	101.3	October.....	102.5	99.4
June.....	102.5	101.3	November.....	102.5	99.4
July.....	102.5	101.3	December.....	102.5	99.4
August.....	102.5	101.3	1939		
September.....	102.5	101.3	January.....	102.5	100.0
October.....	102.5	99.0	February.....	102.5	100.0
November.....	102.5	99.0	March.....	102.5	100.0
December.....	94.2	99.0	April.....	102.5	100.0
1937			May.....	102.5	100.0
January.....	94.2	98.8	June.....	102.5	100.0
February.....	94.2	98.8	July.....	102.5	100.0
March.....	94.2	98.8	August.....	102.5	100.0
April.....	102.5	99.3	September.....	95.5	100.0
May.....	102.5	99.3			

Specification: Paint, outside, white, gloss, mixed, first quality; per gallon in gallon cans.

Wholesale: Manufacturer to wholesale dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 71.—*Outside house paint*

REGION VIII. ROCKY MOUNTAIN

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	102.4	101.0	June.....	102.4	100.7
February.....	102.4	101.0	July.....	102.4	100.7
March.....	102.4	101.0	August.....	102.4	100.7
April.....	102.4	101.0	September.....	102.4	100.7
May.....	102.4	101.0	October.....	102.4	100.7
June.....	102.4	101.0	November.....	102.4	100.7
July.....	102.4	101.0	December.....	102.4	100.7
August.....	102.4	101.0			
September.....	102.4	101.0	1938		
October.....	102.4	101.0	January.....	102.4	100.7
November.....	102.4	101.0	February.....	102.4	100.7
December.....	102.4	101.0	March.....	102.4	100.7
1936			April.....	102.4	100.7
January.....	102.4	101.0	May.....	102.4	100.7
February.....	102.4	101.0	June.....	102.4	101.4
March.....	102.4	101.0	July.....	102.4	101.4
April.....	102.4	99.7	August.....	102.4	101.4
May.....	102.4	99.7	September.....	102.4	101.4
June.....	102.4	99.7	October.....	102.4	101.4
July.....	102.4	99.7	November.....	102.4	101.4
August.....	102.4	99.7	December.....	102.4	101.4
September.....	102.4	99.7			
October.....	102.4	99.7	1939		
November.....	102.4	99.7	January.....	102.4	101.4
December.....	94.3	100.5	February.....	102.4	101.4
1937			March.....	102.4	101.4
January.....	94.3	100.5	April.....	102.4	100.5
February.....	94.3	100.5	May.....	102.4	100.5
March.....	94.3	100.5	June.....	102.4	100.9
April.....	102.4	100.7	July.....	102.4	100.9
May.....	102.4	100.7	August.....	102.4	100.9
			September.....	95.5	98.2

Specification: Paint, outside, white, gloss, mixed, first quality; per gallon in gallon cans.

Wholesale: Manufacturer to wholesale dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 72.—*Outside house paint*

REGION IX. PACIFIC

[Wholesale and retail price indexes—July-September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	102.6	99.8	June.....	102.6	100.0
February.....	102.6	99.8	July.....	102.6	100.0
March.....	102.6	99.8	August.....	102.6	100.0
April.....	102.6	99.8	September.....	102.6	100.0
May.....	102.6	99.8	October.....	102.6	100.0
June.....	102.6	99.8	November.....	102.6	100.0
July.....	102.6	99.8	December.....	102.6	100.0
August.....	102.6	99.8	1938		
September.....	102.6	99.8	January.....	102.6	100.0
October.....	102.6	99.8	February.....	102.6	100.0
November.....	102.6	99.8	March.....	102.6	100.0
December.....	102.6	99.8	April.....	102.6	100.0
1936			May.....	102.6	100.0
January.....	102.6	100.0	June.....	102.6	100.0
February.....	102.6	100.0	July.....	102.6	100.0
March.....	102.6	100.0	August.....	102.6	100.0
April.....	102.6	100.0	September.....	102.6	100.0
May.....	102.6	100.0	October.....	102.6	100.0
June.....	102.6	100.0	November.....	102.6	100.0
July.....	102.6	100.0	December.....	102.6	100.0
August.....	102.6	100.0	1939		
September.....	102.6	100.0	January.....	102.6	100.0
October.....	102.6	100.0	February.....	102.6	100.0
November.....	102.6	100.0	March.....	102.6	100.0
December.....	93.9	100.0	April.....	102.6	100.0
1937			May.....	102.6	100.0
January.....	93.9	100.0	June.....	102.6	100.0
February.....	93.9	100.0	July.....	102.6	100.0
March.....	93.9	100.0	August.....	102.6	100.0
April.....	102.6	100.0	September.....	95.2	100.0
May.....	102.6	100.0			

Specification: Paint, outside, white, gloss, first quality, mixed; per gallon in gallon cans.

Wholesale: Manufacturer to wholesale dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

INSIDE PAINT

Inside paint is sold at wholesale at about the same general level throughout the country and price changes have been quite similar, also. However, the prices of inside paint did not follow the same trend as those of outside paint. (See chart X and tables 73 to 82.) Prices remained unchanged from January 1935 until December 1936, when there was a 7 percent drop. Then there were two small increases between April 1936 and September 1939 when there was a decline of slightly over 1 percent. Thus, the level at the end of 1939 was about 8 percent lower than in 1935.

The retail prices of inside paints followed changes in wholesale prices in most regions, except for some lag, particularly after 1937. In the price decline of early 1937 retail prices in New England were cut 1 month later by 10 percent, and in the West North Central wholesale prices declined 7 percent in December 1936, while retail price changes lagged—declining 2 percent in January 1937 and 4 percent in July 1937. Prices in the East South Central declined 3 percent at the end of the year. In the other regions, however, retail prices changed very little during the entire period 1935 to 1939. Only minor fluctuations were reported.

TABLE 73.—*Inside house paint*

COMPOSITE UNITED STATES AVERAGE

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937..Continued		
January.....	107.0	101.1	June.....	100.0	100.4
February.....	107.0	101.1	July.....	100.0	100.2
March.....	107.0	101.1	August.....	100.0	100.2
April.....	107.0	101.1	September.....	100.0	100.2
May.....	107.0	101.1	October.....	100.0	100.1
June.....	107.0	101.1	November.....	100.0	100.1
July.....	107.0	101.1	December.....	100.0	100.1
August.....	107.0	101.1			
September.....	107.0	101.1	1938		
October.....	107.0	101.2	January.....	100.6	100.1
November.....	107.0	101.2	February.....	100.6	100.1
December.....	107.0	101.2	March.....	100.6	100.1
			April.....	100.6	100.1
1936			May.....	100.6	100.1
January.....	107.0	100.5	June.....	100.6	100.0
February.....	107.0	100.5	July.....	100.6	100.0
March.....	107.0	100.5	August.....	100.6	100.0
April.....	107.0	100.4	September.....	100.6	100.0
May.....	107.0	100.4	October.....	100.6	100.0
June.....	107.0	100.4	November.....	100.6	100.0
July.....	107.0	100.4	December.....	100.6	100.0
August.....	107.0	100.4			
September.....	107.0	100.4	1939		
October.....	107.0	100.2	January.....	100.6	100.0
November.....	107.0	100.2	February.....	100.6	100.0
December.....	99.4	100.2	March.....	100.6	100.0
			April.....	100.6	100.0
1937			May.....	100.6	100.0
January.....	99.4	100.3	June.....	100.6	100.0
February.....	99.4	100.3	July.....	100.6	100.0
March.....	99.4	100.4	August.....	100.6	100.0
April.....	100.0	100.4	September.....	98.7	100.0
May.....	100.0	100.4			

Specification: Paint, inside, white, flat, mixed, first quality; per gallon in gallon cans.

Wholesale: Manufacturer to wholesale dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

CHART X

INSIDE HOUSE PAINT

WHOLESALE AND RETAIL PRICE INDEXES

JULY - SEPTEMBER 1939 = 100

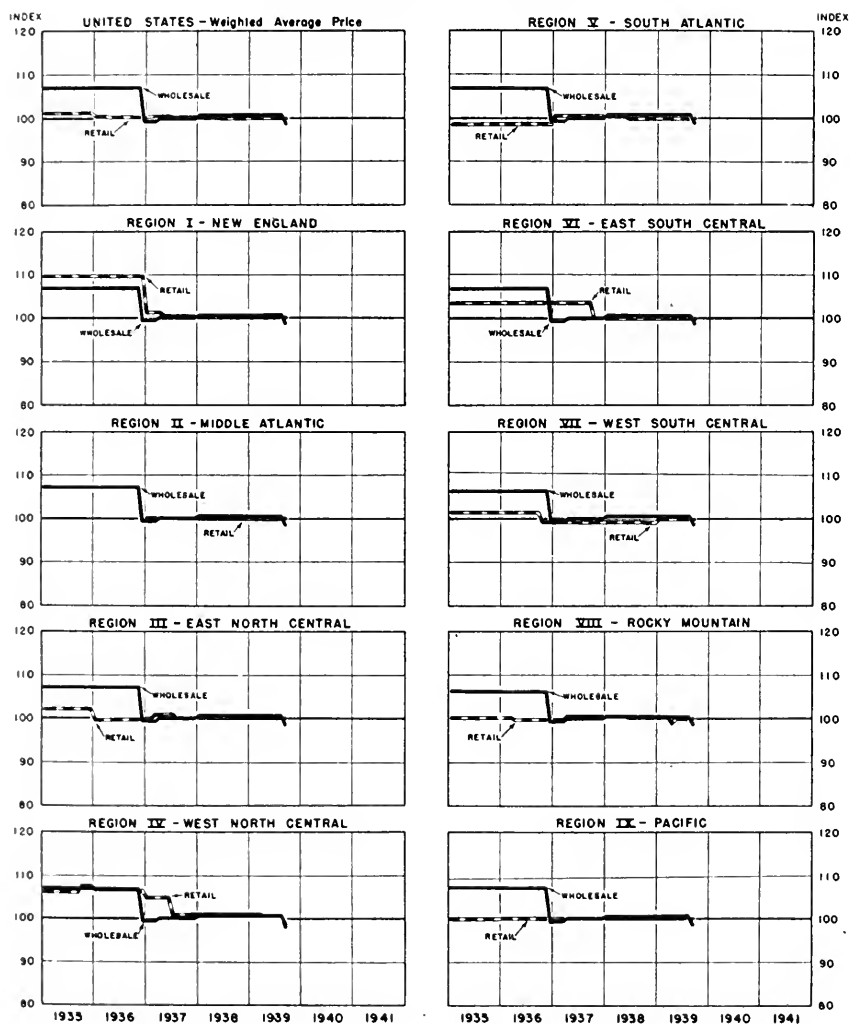


TABLE 74.—*Inside house paint*

REGION I. NEW ENGLAND

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	106.9	109.8	June.....	100.0	100.3
February.....	106.9	109.8	July.....	100.0	100.3
March.....	106.9	109.8	August.....	100.0	100.3
April.....	106.9	109.8	September.....	100.0	100.3
May.....	106.9	109.8	October.....	100.0	100.3
June.....	106.9	109.8	November.....	100.0	100.3
July.....	106.9	109.8	December.....	100.0	100.3
August.....	106.9	109.8	1938		
September.....	106.9	109.8	January.....	100.6	100.0
October.....	106.9	109.8	February.....	100.6	100.0
November.....	106.9	109.8	March.....	100.6	100.0
December.....	106.9	109.8	April.....	100.6	100.0
1936			May.....	100.6	100.0
January.....	106.9	109.8	June.....	100.6	100.0
February.....	106.9	109.8	July.....	100.6	100.0
March.....	106.9	109.8	August.....	100.6	100.0
April.....	106.9	109.8	September.....	100.6	100.0
May.....	106.9	109.8	October.....	100.6	100.0
June.....	106.9	109.8	November.....	100.6	100.0
July.....	106.9	109.8	December.....	100.6	100.0
August.....	106.9	109.8	1939		
September.....	106.9	109.8	January.....	100.6	100.0
October.....	106.9	109.8	February.....	100.6	100.0
November.....	106.9	109.8	March.....	100.6	100.0
December.....	99.4	109.8	April.....	100.6	100.0
1937			May.....	100.6	100.0
January.....	99.4	101.1	June.....	100.6	100.0
February.....	99.4	101.1	July.....	100.6	100.0
March.....	99.4	101.1	August.....	100.6	100.0
April.....	100.0	101.1	September.....	98.8	100.0
May.....	100.0	100.3			

Specification: Paint, inside, white, flat, mixed, first quality; per gallon in gallon cans.

Wholesale: Manufacturer to wholesale dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 75.—*Inside house paint*

REGION II. MIDDLE ATLANTIC

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January	107.1		June	100.0	100.0
February	107.1		July	100.0	100.0
March	107.1		August	100.0	100.0
April	107.1		September	100.0	100.0
May	107.1		October	100.0	100.0
June	107.1		November	100.0	100.0
July	107.1		December	100.0	100.0
August	107.1				
September	107.1		1938		
October	107.1		January	100.6	100.0
November	107.1		February	100.6	100.0
December	107.1		March	100.6	100.0
1936			April	100.6	100.0
January	107.1		May	100.6	100.0
February	107.1		June	100.6	100.0
March	107.1		July	100.6	100.0
April	107.1		August	100.6	100.0
May	107.1		September	100.6	100.0
June	107.1		October	100.6	100.0
July	107.1		November	100.6	100.0
August	107.1		December	100.6	100.0
September	107.1				
October	107.1		1939		
November	107.1		January	100.6	100.0
December	99.4		February	100.6	100.0
1937			March	100.6	100.0
January	99.4	100.0	April	100.6	100.0
February	99.4	100.0	May	100.6	100.0
March	99.4	100.0	June	100.6	100.0
April	100.0	100.0	July	100.6	100.0
May	100.0	100.0	August	100.6	100.0
			September	98.7	100.0

Specification: Paint, inside, white, flat, mixed, first quality; per gallon in gallon cans.

Wholesale: Manufacturer to wholesale dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 76.—*Inside house paint*

REGION III. EAST NORTH CENTRAL

[Wholesale and retail price indexes—July-September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	107.1	102.1	June.....	100.0	100.7
February.....	107.1	102.1	July.....	100.0	100.7
March.....	107.1	102.1	August.....	100.0	100.0
April.....	107.1	102.1	September.....	100.0	100.0
May.....	107.1	102.1	October.....	100.0	100.0
June.....	107.1	102.1	November.....	100.0	100.0
July.....	107.1	102.1	December.....	100.0	100.0
August.....	107.1	102.1			
September.....	107.1	102.1	1938		
October.....	107.1	102.1	January.....	100.6	100.0
November.....	107.1	102.1	February.....	100.6	100.0
December.....	107.1	102.1	March.....	100.6	100.0
1936			April.....	100.6	100.0
January.....	107.1	99.6	May.....	100.6	100.0
February.....	107.1	99.6	June.....	100.6	100.0
March.....	107.1	99.6	July.....	100.6	100.0
April.....	107.1	99.6	August.....	100.6	100.0
May.....	107.1	99.6	September.....	100.6	100.0
June.....	107.1	99.6	October.....	100.6	100.0
July.....	107.1	99.6	November.....	100.6	100.0
August.....	107.1	99.6	December.....	100.6	100.0
September.....	107.1	99.6			
October.....	107.1	99.6	1939		
November.....	107.1	99.6	January.....	100.6	100.0
December.....	99.4	99.6	February.....	100.6	100.0
1937			March.....	100.6	100.0
January.....	99.4	99.9	April.....	100.6	100.0
February.....	99.4	99.9	May.....	100.6	100.0
March.....	99.4	100.7	June.....	100.6	100.0
April.....	100.0	100.7	July.....	100.6	100.0
May.....	100.0	100.7	August.....	106.6	100.0
			September.....	98.7	100.0

Specification: Paint, inside, white, flat, mixed, first quality; per gallon in gallon cans.

Wholesale: Manufacturer to wholesale dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 77.—*Inside house paint*

REGION IV. WEST NORTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	106.9	106.2	June.....	100.0	104.9
February.....	106.9	106.2	July.....	100.0	100.9
March.....	106.9	106.2	August.....	100.0	100.9
April.....	106.9	106.2	September.....	100.0	100.9
May.....	106.9	106.2	October.....	100.0	100.9
June.....	106.9	106.2	November.....	100.0	100.9
July.....	106.9	106.2	December.....	100.0	100.9
August.....	106.9	106.2	1938		
September.....	106.9	106.2	January.....	100.6	100.9
October.....	106.9	107.6	February.....	100.6	100.9
November.....	106.9	107.6	March.....	100.6	100.9
December.....	106.9	107.6	April.....	100.6	100.9
1936			May.....	100.6	100.9
January.....	106.9	106.6	June.....	100.6	100.9
February.....	106.9	106.6	July.....	100.6	100.9
March.....	106.9	106.6	August.....	100.6	100.9
April.....	106.9	106.6	September.....	100.6	100.9
May.....	106.9	106.6	October.....	100.6	100.9
June.....	106.9	106.6	November.....	100.6	100.9
July.....	106.9	106.6	December.....	100.6	100.9
August.....	106.9	106.6	1939		
September.....	106.9	106.6	January.....	100.6	100.9
October.....	106.9	106.6	February.....	100.6	100.9
November.....	106.9	106.6	March.....	100.6	100.9
December.....	99.4	106.6	April.....	100.6	100.6
1937			May.....	100.6	100.6
January.....	99.4	104.9	June.....	100.6	100.6
February.....	99.4	104.9	July.....	100.6	100.6
March.....	99.4	104.9	August.....	100.6	100.6
April.....	100.0	104.9	September.....	98.8	98.6
May.....	100.0	104.9			

Specification: Paint, inside, white, flat, mixed, first quality; per gallon in gallon cans.

Wholesale: Manufacturer to wholesale dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

CONCENTRATION OF ECONOMIC POWER

TABLE 78.—*Inside house paint*

REGION V. SOUTH ATLANTIC

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January	106.8	98.6	June	100.0	100.5
February	106.8	98.6	July	100.0	100.5
March	106.8	98.6	August	100.0	100.5
April	106.8	98.6	September	100.0	100.5
May	106.8	98.6	October	100.0	100.5
June	106.8	98.6	November	100.0	100.5
July	106.8	98.6	December	100.0	100.5
August	106.8	98.6	1938		
September	106.8	98.6	January	100.6	100.5
October	106.8	98.6	February	100.6	100.5
November	106.8	98.6	March	100.6	100.5
December	106.8	98.6	April	100.6	100.5
1936			May	100.6	100.5
January	106.8	98.6	June	100.6	100.0
February	106.8	98.6	July	100.6	100.0
March	106.8	98.6	August	100.6	100.0
April	106.8	98.6	September	100.6	100.0
May	106.8	98.6	October	100.6	100.0
June	106.8	98.6	November	100.6	100.0
July	106.8	98.6	December	100.6	100.0
August	106.8	98.6	1939		
September	106.8	98.6	January	100.6	100.0
October	106.8	98.6	February	100.6	100.0
November	106.8	98.6	March	100.6	100.0
December	99.4	98.6	April	100.6	100.0
1937			May	100.6	100.0
January	99.4	100.5	June	100.6	100.0
February	99.4	100.5	July	100.6	100.0
March	99.4	100.5	August	100.6	100.0
April	100.0	100.5	September	98.8	100.0
May	100.0	100.5			

Specification: Paint, inside, white, flat, mixed, first quality; per gallon in gallon cans.

Wholesale: Manufacturer to wholesale dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 79.—*Inside house paint*

REGION VI. EAST SOUTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	106.8	103.5	June.....	100.0	103.5
February.....	106.8	103.5	July.....	100.0	103.5
March.....	106.8	103.5	August.....	100.0	103.5
April.....	106.8	103.5	September.....	100.0	103.5
May.....	106.8	103.5	October.....	100.0	100.0
June.....	106.8	103.5	November.....	100.0	100.0
July.....	106.8	103.5	December.....	100.0	100.0
August.....	106.8	103.5	1938		
September.....	106.8	103.5	January.....	100.6	100.0
October.....	106.8	103.5	February.....	100.6	100.0
November.....	106.8	103.5	March.....	100.6	100.0
December.....	106.8	103.5	April.....	100.6	100.0
1936			May.....	100.6	100.0
January.....	106.8	103.5	June.....	100.6	100.0
February.....	106.8	103.5	July.....	100.6	100.0
March.....	106.8	103.5	August.....	100.6	100.0
April.....	106.8	103.5	September.....	100.6	100.0
May.....	106.8	103.5	October.....	100.6	100.0
June.....	106.8	103.5	November.....	100.6	100.0
July.....	106.8	103.5	December.....	100.6	100.0
August.....	106.8	103.5	1939		
September.....	106.8	103.5	January.....	100.6	100.0
October.....	106.8	103.5	February.....	100.6	100.0
November.....	106.8	103.5	March.....	100.6	100.0
December.....	99.4	103.5	April.....	100.6	100.0
1937			May.....	100.6	100.0
January.....	99.4	103.5	June.....	100.6	100.0
February.....	99.4	103.5	July.....	100.6	100.0
March.....	99.4	103.5	August.....	100.6	100.0
April.....	100.0	103.5	September.....	98.8	100.0
May.....	100.0	103.5			

Specification: Paint, inside, white, flat, mixed, first quality; per gallon in gallon cans.

Wholesale: Manufacturer to wholesale dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 80.—*Inside house paint*

REGION VII. WEST SOUTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	106.5	101.5	June.....	100.0	99.3
February.....	106.5	101.5	July.....	100.0	99.3
March.....	106.5	101.5	August.....	100.0	99.3
April.....	106.5	101.5	September.....	100.0	99.3
May.....	106.5	101.5	October.....	100.0	99.3
June.....	106.5	101.5	November.....	100.0	99.3
July.....	106.5	101.5	December.....	100.0	99.3
August.....	106.5	101.5	1938		
September.....	106.5	101.5	January.....	100.6	99.3
October.....	106.5	101.5	February.....	100.6	99.3
November.....	106.5	101.5	March.....	100.6	99.3
December.....	106.5	101.5	April.....	100.6	99.3
1936			May.....	100.6	99.3
January.....	106.5	101.5	June.....	100.6	99.3
February.....	166.5	101.5	July.....	100.6	99.3
March.....	106.5	101.5	August.....	100.6	99.3
April.....	106.5	101.5	September.....	100.6	99.3
May.....	106.5	101.5	October.....	100.6	99.1
June.....	106.5	101.5	November.....	100.6	99.1
July.....	106.5	101.5	December.....	100.6	99.1
August.....	106.5	101.5	1939		
September.....	106.5	101.5	January.....	100.6	100.0
October.....	106.5	99.3	February.....	100.6	100.0
November.....	106.5	99.3	March.....	100.6	100.0
December.....	99.4	99.3	April.....	100.6	100.0
1937			May.....	100.6	100.0
January.....	99.4	99.3	June.....	100.6	100.0
February.....	99.4	99.3	July.....	100.6	100.0
March.....	99.4	99.3	August.....	100.6	100.0
April.....	100.0	99.3	September.....	98.8	100.0
May.....	100.0	99.3			

Specifications: Paint, inside, white, flat, mixed, first quality; per gallon in gallon cans.

Wholesale: Manufacturer to wholesale dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 81.—*Inside house paint*

REGION VIII. ROCKY MOUNTAIN

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Wholesale	Retail		Wholesale	Retail
1935			1937—Continued		
January.....	106.4	100.2	June.....	100.0	100.6
February.....	106.4	100.2	July.....	100.0	100.6
March.....	106.4	100.2	August.....	100.0	100.6
April.....	106.4	100.2	September.....	100.0	100.6
May.....	106.4	100.2	October.....	100.0	100.6
June.....	106.4	100.2	November.....	100.0	100.6
July.....	106.4	100.2	December.....	100.0	100.6
August.....	106.4	100.2	1938		
September.....	106.4	100.2	January.....	100.6	100.6
October.....	106.4	100.2	February.....	100.6	100.6
November.....	106.4	100.2	March.....	100.6	100.6
December.....	106.4	100.2	April.....	100.6	100.6
1936			May.....	100.6	100.6
January.....	106.4	100.2	June.....	100.6	100.5
February.....	106.4	100.2	July.....	100.6	100.5
March.....	106.4	100.2	August.....	100.6	100.5
April.....	106.4	99.7	September.....	100.6	100.5
May.....	106.4	99.7	October.....	100.6	100.5
June.....	106.4	99.8	November.....	100.6	100.5
July.....	106.4	99.8	December.....	100.6	100.5
August.....	106.4	99.8	1939		
September.....	106.4	99.8	January.....	100.6	100.5
October.....	106.4	99.8	February.....	100.6	100.5
November.....	106.4	99.8	March.....	100.6	100.5
December.....	99.4	99.8	April.....	100.6	99.0
1937			May.....	100.6	100.0
January.....	99.4	99.8	June.....	100.6	100.0
February.....	99.4	99.8	July.....	100.6	100.0
March.....	99.4	99.8	August.....	100.6	100.0
April.....	100.0	100.6	September.....	98.8	100.0
May.....	100.0	100.6			

Specification: Paint, inside, white, flat, mixed, first quality; per gallon in gallon cans.

Wholesale: Manufacturer to wholesale dealer, f.o.b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 82.—*Inside house paint*

REGION IX. PACIFIC

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	107.1	99.8	June.....	100.0	100.0
February.....	107.1	99.8	July.....	100.0	100.0
March.....	107.1	99.8	August.....	100.0	100.0
April.....	107.1	99.8	September.....	100.0	100.0
May.....	107.1	99.8	October.....	100.0	100.0
June.....	107.1	99.8	November.....	100.0	100.0
July.....	107.1	99.8	December.....	100.0	100.0
August.....	107.1	99.8	1938		
September.....	107.1	99.8	January.....	100.6	100.0
October.....	107.1	99.8	February.....	100.6	100.0
November.....	107.1	99.8	March.....	100.6	100.0
December.....	107.1	99.8	April.....	100.6	100.0
1936			May.....	100.6	100.0
January.....	107.1	100.0	June.....	100.6	100.0
February.....	107.1	100.0	July.....	100.6	100.0
March.....	107.1	100.0	August.....	100.6	100.0
April.....	107.1	100.0	September.....	100.6	100.0
May.....	107.1	100.0	October.....	100.6	100.0
June.....	107.1	100.0	November.....	100.6	100.0
July.....	107.1	100.0	December.....	100.6	100.0
August.....	107.1	100.0	1939		
September.....	107.1	100.0	January.....	100.6	100.0
October.....	107.1	100.0	February.....	100.6	100.0
November.....	107.1	100.0	March.....	100.6	100.0
December.....	99.4	100.0	April.....	100.6	100.0
1937			May.....	100.6	100.0
January.....	99.4	100.0	June.....	100.6	100.0
February.....	99.4	100.0	July.....	100.6	100.0
March.....	99.4	100.0	August.....	100.6	100.0
April.....	100.0	100.0	September.....	98.7	100.0
May.....	100.0	100.0			

Specification: Paint, inside, white, flat, mixed, first quality; per gallon in gallon cans.

Wholesale: Manufacturer to wholesale dealer, f.o.b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

ENAMEL

Prices for enamel have followed a very different course from those of paint. The principal component being chinawood oil, varnish and enamel manufacturers are more susceptible to changes in raw material costs. In September 1935 there was an average advance of 12 percent in the wholesale markets from the level which had prevailed for the first 8 months of that year. (See chart XI and tables 83 to 92.) There was then no change for over a year, until the November 1936 reduction of a little over 1 percent. An upswing began in April 1937, followed by another increase in January 1938 and a period of stability until September 1939, when there was another advance of about 4 percent.

As reflected by the Bureau of Labor Statistics' index, based on the third quarter of 1939 as 100, this represents a rise from 85 percent in January 1935 to 102.2 percent in September 1939. Wholesale prices followed the same general pattern in all regions.

Retail prices for the various regions showed less change from 1935 to 1939 than wholesale prices. Three regions—South Atlantic, East South Central, and West South Central—showed less than 2 percent variation throughout the period, and the Rocky Mountain area showed

fluctuations of less than 3 percent, notwithstanding a rise of 4 percent in the latter part of 1936. The Pacific area showed no change throughout the period. A rise occurred in the New England section, where there was a 12 percent advance in September 1936, which was maintained only through the remaining months of 1936. By May 1937 prices were down 8 percent, where they remained through September 1939. Incomplete data for the Middle Atlantic area showed prices unchanged from 1938 to September 1939. In the East North Central region, after a period of stability through 1935, there were a series of small advances in 1936 and 1937, a rise in January 1938, and another in January 1939. The West North Central region differed from other regions by showing a 2 percent drop in October 1935 and not advancing again until 1937, when a series of rises carried prices well up by January 1938, with a subsequent drop in January 1939. These changes are shown in the price indexes for enamel, based on average prices for the third quarter of 1939 as 100.0.

TABLE 83.—*Interior enamel*

COMPOSITE UNITED STATES AVERAGE

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Wholesale	Retail		Wholesale	Retail
1935			1937—Continued		
January.....	85.0	98.4	June.....	98.0	99.6
February.....	85.0	98.4	July.....	98.0	99.6
March.....	85.0	98.4	August.....	98.0	99.6
April.....	85.0	98.4	September.....	98.0	99.6
May.....	85.0	98.4	October.....	98.0	99.6
June.....	85.0	98.4	November.....	98.0	99.6
July.....	85.0	98.4	December.....	98.0	99.6
August.....	85.0	98.4	1938		
September.....	94.9	98.4	January.....	98.6	99.9
October.....	94.9	98.4	February.....	98.6	99.9
November.....	94.9	98.4	March.....	98.6	99.9
December.....	94.9	98.4	April.....	98.6	99.9
1936			May.....	98.6	99.9
January.....	94.9	98.6	June.....	98.6	99.9
February.....	95.0	98.6	July.....	98.6	99.9
March.....	95.0	98.6	August.....	98.6	99.9
April.....	95.0	98.7	September.....	98.6	99.9
May.....	95.0	98.7	October.....	98.6	99.9
June.....	95.0	98.7	November.....	98.6	99.9
July.....	94.9	98.7	December.....	98.6	99.9
August.....	94.9	98.7	1939		
September.....	94.9	99.1	January.....	98.6	99.9
October.....	94.9	98.9	February.....	98.6	99.9
November.....	94.9	99.1	March.....	98.6	99.9
December.....	93.5	99.3	April.....	98.6	99.9
1937			May.....	98.6	100.0
January.....	93.5	99.5	June.....	98.6	100.0
February.....	93.5	99.5	July.....	98.6	100.0
March.....	93.5	99.5	August.....	98.6	100.0
April.....	98.0	99.7	September.....	102.4	100.0
May.....	98.0	99.6			

Specification: Enamel, white, quick-drying, interior, gloss, mixed, first quality; per gallon in gallon cans

Wholesale: Manufacturer to wholesale dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

CHART XI

INTERIOR ENAMEL
WHOLESALE AND RETAIL PRICE INDEXES
JULY - SEPTEMBER 1939 = 100

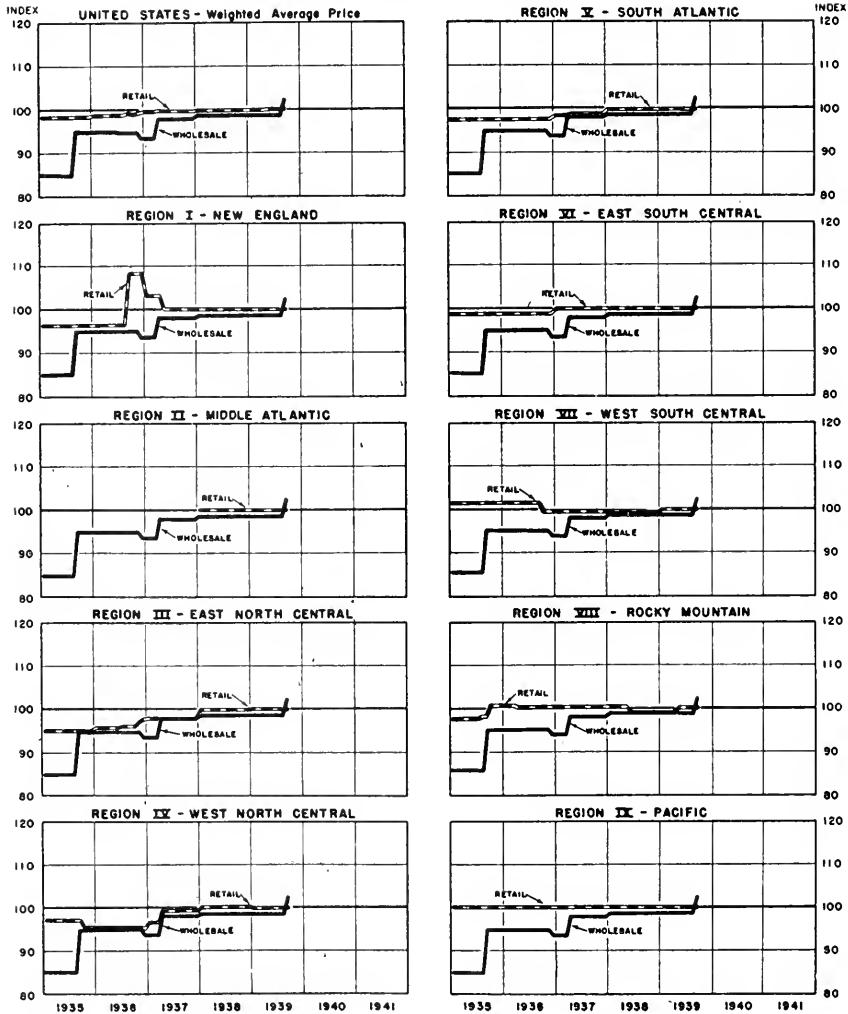


TABLE 84.—*Interior enamel*

REGION I. NEW ENGLAND

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	85.1	96.5	June.....	98.0	100.0
February.....	85.1	96.5	July.....	98.0	100.0
March.....	85.1	96.5	August.....	98.0	100.0
April.....	85.1	96.5	September.....	98.0	100.0
May.....	85.1	96.5	October.....	98.0	100.0
June.....	85.1	96.5	November.....	98.0	100.0
July.....	85.1	96.5	December.....	98.0	100.0
August.....	85.1	96.5	1938		
September.....	94.9	96.5	January.....	98.6	100.0
October.....	94.9	96.5	February.....	98.6	100.0
November.....	94.9	96.5	March.....	98.6	100.0
December.....	94.9	96.5	April.....	98.6	100.0
1936			May.....	98.6	100.0
January.....	94.9	96.5	June.....	98.6	100.0
February.....	94.9	96.5	July.....	98.6	100.0
March.....	94.9	96.5	August.....	98.6	100.0
April.....	94.9	96.5	September.....	98.6	100.0
May.....	94.9	96.5	October.....	98.6	100.0
June.....	94.9	96.5	November.....	98.6	100.0
July.....	94.9	96.5	December.....	98.6	100.0
August.....	94.9	96.5	1939		
September.....	94.9	108.3	January.....	98.6	100.0
October.....	94.9	108.3	February.....	98.6	100.0
November.....	94.9	108.3	March.....	98.6	100.0
December.....	93.6	108.3	April.....	98.6	100.0
1937			May.....	98.6	100.0
January.....	93.6	103.1	June.....	98.6	100.0
February.....	93.6	103.1	July.....	98.6	100.0
March.....	93.6	103.1	August.....	98.6	100.0
April.....	98.0	103.1	September.....	102.4	100.0
May.....	98.0	100.0			

Specification: Enamel, white, quick-drying, interior, gloss, mixed, first quality; per gallon in gallon cans.
 Wholesale: Manufacturer to wholesale dealer, f. o. b. cars destination.
 Retail: Dealer to contractor, delivered to job site, city.

TABLE 85.—*Interior enamel*

REGION II. MIDDLE ATLANTIC

[Wholesale and retail price indexes—July-September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January	84.9	-----	June	97.9	-----
February	84.9	-----	July	97.9	-----
March	84.9	-----	August	97.9	-----
April	84.9	-----	September	97.9	-----
May	84.9	-----	October	97.9	-----
June	84.9	-----	November	97.9	-----
July	84.9	-----	December	97.9	-----
August	84.9	-----	1938		
September	94.8	-----	January	98.6	100.0
October	94.8	-----	February	98.6	100.0
November	94.8	-----	March	98.6	100.0
December	94.8	-----	April	98.6	100.0
1936			May	98.6	100.0
January	94.8	-----	June	98.6	100.0
February	94.8	-----	July	98.6	100.0
March	94.8	-----	August	98.6	100.0
April	94.8	-----	September	98.6	100.0
May	94.8	-----	October	98.6	100.0
June	94.8	-----	November	98.6	100.0
July	94.8	-----	December	98.6	100.0
August	94.8	-----	1939		
September	94.8	-----	January	98.6	100.0
October	94.8	-----	February	98.6	100.0
November	94.8	-----	March	98.6	100.0
December	93.5	-----	April	98.6	100.0
1937			May	98.6	100.0
January	93.5	-----	June	98.6	100.0
February	93.5	-----	July	98.6	100.0
March	93.5	-----	August	98.6	100.0
April	97.9	-----	September	102.4	100.0
May	97.9	-----			

Specification: Enamel, white, quick-drying, interior, gloss, mixed, first quality: per gallon in gallon cans.

Wholesale: Manufacturer to wholesale dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 86.—*Interior enamel*

REGION III. EAST NORTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	84.9	95.0	June.....	97.9	97.9
February.....	84.9	95.0	July.....	97.9	97.9
March.....	84.9	95.0	August.....	97.9	97.9
April.....	84.9	95.0	September.....	97.9	97.9
May.....	84.9	95.0	October.....	97.9	97.9
June.....	84.9	95.0	November.....	97.9	97.9
July.....	84.9	95.0	December.....	97.9	97.9
August.....	84.9	95.0			
September.....	94.8	95.0	1938		
October.....	94.8	95.0	January.....	98.6	99.9
November.....	94.8	95.0	February.....	98.6	99.9
December.....	94.8	95.0	March.....	98.6	99.9
			April.....	98.6	99.9
1936			May.....	98.6	99.9
January.....	94.8	95.7	June.....	98.6	99.9
February.....	94.8	95.7	July.....	98.6	99.9
March.....	94.8	95.7	August.....	98.6	99.9
April.....	94.8	95.7	September.....	98.6	99.9
May.....	94.8	95.7	October.....	98.6	99.9
June.....	94.8	95.7	November.....	98.6	99.9
July.....	94.8	96.1	December.....	98.6	99.9
August.....	94.8	96.1			
September.....	94.8	96.1	1939		
October.....	94.8	96.1	January.....	98.6	100.0
November.....	94.8	97.0	February.....	98.6	100.0
December.....	93.5	97.7	March.....	98.6	100.0
			April.....	98.6	100.0
1937			May.....	98.6	100.0
January.....	93.5	97.9	June.....	98.6	100.0
February.....	93.5	97.9	July.....	98.6	100.0
March.....	93.5	97.9	August.....	98.6	100.0
April.....	97.9	97.9	September.....	102.4	100.0
May.....	97.9	97.9			

Specification: Enamel, white, quick-drying, interior, gloss, mixed, first quality; per gallon in gallon cans.

Wholesale: Manufacturer to wholesale dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 87.—*Interior enamel*

REGION IV. WEST NORTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	85.1	97.2	June.....	98.0	99.3
February.....	85.1	97.2	July.....	98.0	99.3
March.....	85.1	97.2	August.....	98.0	99.3
April.....	85.1	97.2	September.....	98.0	99.3
May.....	85.1	97.2	October.....	98.0	99.3
June.....	85.1	97.2	November.....	98.0	99.3
July.....	85.1	97.2	December.....	98.0	99.3
August.....	85.1	97.2	1938		
September.....	94.9	97.2	January.....	98.6	100.1
October.....	94.9	95.5	February.....	98.6	100.1
November.....	94.9	95.5	March.....	98.6	100.1
December.....	94.9	95.5	April.....	98.6	100.1
1936			May.....	98.6	100.1
January.....	94.9	95.5	June.....	98.6	100.1
February.....	94.9	95.5	July.....	98.6	100.1
March.....	94.9	95.5	August.....	98.6	100.1
April.....	94.9	95.5	September.....	98.6	100.1
May.....	94.9	95.5	October.....	98.6	100.1
June.....	94.9	95.5	November.....	98.6	100.1
July.....	94.9	95.5	December.....	98.6	100.1
August.....	94.9	95.5	1939		
September.....	94.9	95.5	January.....	98.6	100.0
October.....	94.9	95.5	February.....	98.6	100.0
November.....	94.9	95.5	March.....	98.6	100.0
December.....	93.6	95.1	April.....	98.6	100.0
1937			May.....	98.6	100.0
January.....	93.6	96.6	June.....	98.6	100.0
February.....	93.6	96.6	July.....	98.6	100.0
March.....	93.6	96.6	August.....	98.6	100.0
April.....	98.0	99.3	September.....	102.4	100.0
May.....	98.0	99.3			

Specification: Enamel, white, quick-drying, interior, gloss, mixed, first quality; per gallon in gallon cans.

Wholesale: Manufacturer to wholesale dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 88.—*Interior enamel*

REGION V. SOUTH ATLANTIC

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	85.1	97.6	June.....	98.0	98.7
February.....	85.1	97.6	July.....	98.0	98.7
March.....	85.1	97.6	August.....	98.0	98.7
April.....	85.1	97.6	September.....	98.0	98.7
May.....	85.1	97.6	October.....	98.0	98.7
June.....	85.1	97.6	November.....	98.0	98.7
July.....	85.1	97.6	December.....	98.0	98.7
August.....	85.1	97.6			
September.....	94.9	97.6	1938		
October.....	94.9	97.6	January.....	98.6	99.7
November.....	94.9	97.6	February.....	98.6	99.7
December.....	94.9	97.6	March.....	98.6	99.7
1936			April.....	98.6	99.7
January.....	94.9	97.6	May.....	98.6	99.7
February.....	94.9	97.6	June.....	98.6	99.7
March.....	94.9	97.6	July.....	98.6	99.7
April.....	94.9	97.6	August.....	98.6	99.7
May.....	94.9	97.6	September.....	98.6	99.7
June.....	94.9	97.6	October.....	98.6	99.7
July.....	94.9	97.6	November.....	98.6	99.7
August.....	94.9	97.6	December.....	98.6	99.7
September.....	94.9	97.6			
October.....	94.9	97.6	1939		
November.....	94.9	97.6	January.....	98.6	99.7
December.....	93.6	97.6	February.....	98.6	99.7
1937			March.....	98.6	99.7
January.....	93.6	98.3	April.....	98.6	99.7
February.....	93.6	98.3	May.....	98.6	99.7
March.....	93.6	98.3	June.....	98.6	99.7
April.....	98.0	98.4	July.....	98.6	99.7
May.....	98.0	98.7	August.....	98.6	99.7
			September.....	102.4	100.5

Specification: Enamel, white, quick-drying, interior, gloss, mixed, first quality; per gallon in gallon cans.

Wholesale: Manufacturer to wholesale dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 89.—*Interior enamel*

REGION VI. EAST SOUTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	85.2	98.7	July.....	98.0	100.0
February.....	85.2	98.7	August.....	98.0	100.0
March.....	85.2	98.7	September.....	98.0	100.0
April.....	85.2	98.7	October.....	98.0	100.0
May.....	85.2	98.7	November.....	98.0	100.0
June.....	85.2	98.7	December.....	98.0	100.0
July.....	85.2	98.7			
August.....	85.2	98.7	1938		
September.....	95.0	98.7	January.....	98.7	100.0
October.....	95.0	98.7	February.....	98.7	100.0
November.....	95.0	98.7	March.....	98.7	100.0
December.....	95.0	98.7	April.....	98.7	100.0
1936			May.....	98.7	100.0
January.....	95.0	98.7	June.....	98.7	100.0
February.....	95.0	98.7	July.....	98.7	100.0
March.....	95.0	98.7	August.....	98.7	100.0
April.....	95.0	98.7	September.....	98.7	100.0
May.....	95.0	98.7	October.....	98.7	100.0
June.....	95.0	98.7	November.....	98.7	100.0
July.....	95.0	98.7	December.....	98.7	100.0
August.....	95.0	98.7			
September.....	95.0	98.7	1939		
October.....	95.0	98.7	January.....	98.7	100.0
November.....	95.0	98.7	February.....	98.7	100.0
December.....	93.6	98.7	March.....	98.7	100.0
1937			April.....	98.7	100.0
January.....	93.6	100.0	May.....	98.7	100.0
February.....	93.6	100.0	June.....	98.7	100.0
March.....	93.6	100.0	July.....	98.7	100.0
April.....	98.0	100.0	August.....	98.7	100.0
May.....	98.0	100.0	September.....	102.4	100.0
June.....	98.0	100.0			

Specification: Enamel, white, quick-drying, interior, gloss, mixed, first quality; per gallon in gallon cans.

Wholesale: Manufacturer to wholesale dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 90.—*Interior enamel*

REGION VII. WEST SOUTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	85.5	101.5	June.....	98.0	99.5
February.....	85.5	101.5	July.....	98.0	99.5
March.....	85.5	101.5	August.....	98.0	99.5
April.....	85.5	101.5	September.....	98.0	99.5
May.....	85.5	101.5	October.....	98.0	99.5
June.....	85.5	101.5	November.....	98.0	99.5
July.....	85.5	101.5	December.....	98.0	99.5
August.....	85.5	101.5	1938		
September.....	95.1	101.5	January.....	98.7	99.5
October.....	95.1	101.5	February.....	98.7	99.5
November.....	95.1	101.5	March.....	98.7	99.5
December.....	95.1	101.5	April.....	98.7	99.5
1936			May.....	98.7	99.5
January.....	95.1	101.5	June.....	98.7	99.5
February.....	95.1	101.5	July.....	98.7	99.5
March.....	95.1	101.5	August.....	98.7	99.5
April.....	95.1	101.5	September.....	98.7	99.5
May.....	95.1	101.5	October.....	98.7	99.4
June.....	95.1	101.5	November.....	98.7	99.4
July.....	95.1	101.5	December.....	98.7	99.4
August.....	95.1	101.5	1939		
September.....	95.1	101.5	January.....	98.7	100.0
October.....	95.1	99.5	February.....	98.7	100.0
November.....	95.1	99.5	March.....	98.7	100.0
December.....	93.8	99.5	April.....	98.7	100.0
1937			May.....	98.7	100.0
January.....	93.8	99.5	June.....	98.7	100.0
February.....	93.8	99.5	July.....	98.7	100.0
March.....	93.8	99.5	August.....	98.7	100.0
April.....	98.0	99.5	September.....	102.3	100.0
May.....	98.0	99.5			

Specification: Enamel, white, quick-drying, interior, gloss, mixed, first quality; per gallon in gallon cans.

Wholesale: Manufacturer to wholesale dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 91.—*Interior enamel*

REGION VIII. ROCKY MOUNTAIN

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	85.6	97.5	June.....	98.0	100.1
February.....	85.6	97.5	July.....	98.0	100.1
March.....	85.6	97.5	August.....	98.0	100.1
April.....	85.6	97.5	September.....	98.0	100.1
May.....	85.6	97.5	October.....	98.0	100.1
June.....	85.6	97.5	November.....	98.0	100.1
July.....	85.6	97.5	December.....	98.0	100.1
August.....	85.6	98.1	1938		
September.....	95.1	98.1	January.....	98.7	100.1
October.....	95.1	100.5	February.....	98.7	100.1
November.....	95.1	100.5	March.....	98.7	100.1
December.....	95.1	100.5	April.....	98.7	100.1
1936			May.....	98.7	100.1
January.....	95.1	100.5	June.....	98.7	99.3
February.....	95.1	100.5	July.....	98.7	99.3
March.....	95.1	100.5	August.....	98.7	99.3
April.....	95.1	100.1	September.....	98.7	99.3
May.....	95.1	100.1	October.....	98.7	99.3
June.....	95.1	100.1	November.....	98.7	99.3
July.....	95.1	100.1	December.....	98.7	99.3
August.....	95.1	100.1	1939		
September.....	95.1	100.1	January.....	98.7	99.3
October.....	95.1	100.1	February.....	98.7	99.3
November.....	95.1	100.1	March.....	98.7	99.3
December.....	93.8	100.1	April.....	98.7	99.3
1937			May.....	98.7	100.0
January.....	93.8	100.1	June.....	98.7	100.0
February.....	93.8	100.1	July.....	98.7	100.0
March.....	93.8	100.1	August.....	98.7	100.0
April.....	98.0	100.1	September.....	102.3	100.0
May.....	98.0	100.1			

Specification: Enamel, white, quick-drying, interior, gloss, mixed, first quality; per gallon in gallon cans.

Wholesale: Manufacturer to wholesale dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 92.—*Interior enamel*

REGION IX. PACIFIC

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	84.9	100.0	June.....	97.9	100.0
February.....	84.9	100.0	July.....	97.9	100.0
March.....	84.9	100.0	August.....	97.9	100.0
April.....	84.9	100.0	September.....	97.9	100.0
May.....	84.9	100.0	October.....	97.9	100.0
June.....	84.9	100.0	November.....	97.9	100.0
July.....	84.9	100.0	December.....	97.9	100.0
August.....	84.9	100.0	1938		
September.....	94.8	100.0	January.....	98.6	100.0
October.....	94.8	100.0	February.....	98.6	100.0
November.....	94.8	100.0	March.....	98.6	100.0
December.....	94.8	100.0	April.....	98.6	100.0
1936			May.....	98.6	100.0
January.....	94.8	100.0	June.....	98.6	100.0
February.....	94.8	100.0	July.....	98.6	100.0
March.....	94.8	100.0	August.....	98.6	100.0
April.....	94.8	100.0	September.....	98.6	100.0
May.....	94.8	100.0	October.....	98.6	100.0
June.....	94.8	100.0	November.....	98.6	100.0
July.....	94.8	100.0	December.....	98.6	100.0
August.....	94.8	100.0	1939		
September.....	94.8	100.0	January.....	98.6	100.0
October.....	94.8	100.0	February.....	98.6	100.0
November.....	94.8	100.0	March.....	98.6	100.0
December.....	93.5	100.0	April.....	98.6	100.0
1937			May.....	98.6	100.0
January.....	93.5	100.0	June.....	98.6	100.0
February.....	93.5	100.0	July.....	98.6	100.0
March.....	93.5	100.0	August.....	98.6	100.0
April.....	97.9	100.0	September.....	102.4	100.0
May.....	97.9	100.0			

Specification: Enamel, white, quick-drying, interior, gloss, mixed, first quality; per gallon in gallon cans.

Wholesale: Manufacturer to wholesale dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

VARNISH

As in the other paints, wholesale prices of varnish follow the same general trend for all regions. (See chart XII and tables 93 to 102.) Because of the raw materials used the price of varnish, like enamel, is more sensitive to raw material price changes. After a period of stability in the first 8 months of 1935, there was an advance of 12 percent in September, and no further change again until December 1936, when a slight rise of about 2 percent was sustained for 4 months. There was then no change until January 1938, when there was a rise of less than 1 percent. In September 1939, however, there was an increase of 5.8 percent. Thus, as reflected in the Bureau's indexes, based on the third quarter of 1939 as 100, there was a net rise from 87.4 percent of that average in 1935 to 103.9 percent in September 1939.

Notwithstanding these changes in wholesale prices, retail prices for four regions—Middle Atlantic, East North Central, West North Central, and South Atlantic—remained practically unchanged for the period, the variation in each area being less than 2 percent. The New England, East South Central, and West South Central regions showed trends opposite to the wholesale series for the first 3 years covered by the survey. In each of these regions, prices were relatively high rather than low, through 1935 and 1936, and were followed by a series of reductions in 1937, at a time when wholesale prices were advancing. From that time on, no important changes occurred to the end of 1939. In the Rocky Mountain area, retail prices increased about 8 percent in the last half of 1935; and there have been no important changes since that time, while on the Pacific coast prices rose slightly in October 1935 and again in July 1938.

CHART XII

INTERIOR VARNISH

WHOLESALE AND RETAIL PRICE INDEXES

JULY - SEPTEMBER 1939 = 100

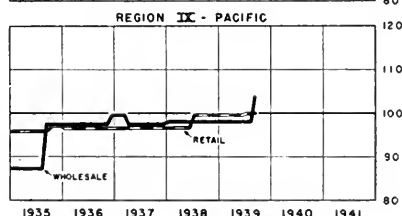
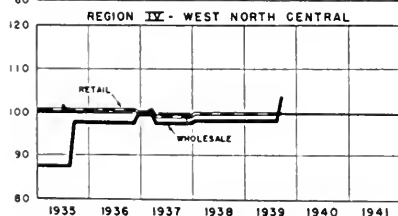
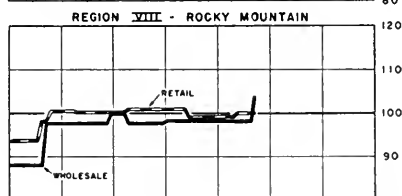
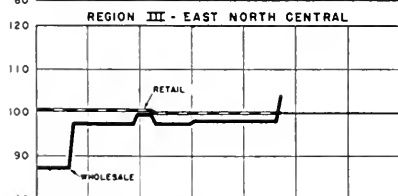
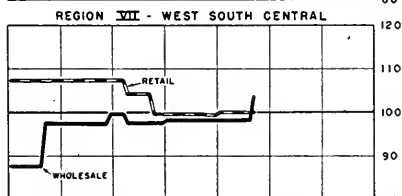
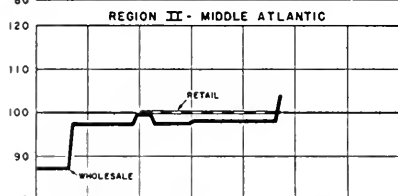
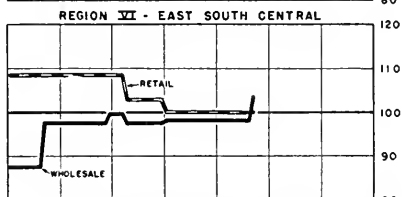
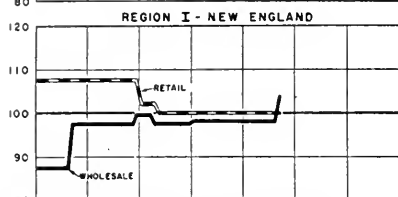
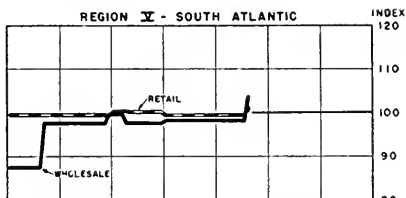
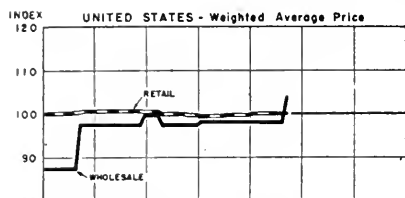


TABLE 93.—*Interior varnish*
COMPOSITE UNITED STATES AVERAGE

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	87.4	100.1	June.....	97.5	100.0
February.....	87.4	100.1	July.....	97.5	100.0
March.....	87.4	100.1	August.....	97.5	100.0
April.....	87.4	100.1	September.....	97.5	100.0
May.....	87.4	100.1	October.....	97.5	99.7
June.....	87.4	100.1	November.....	97.5	99.7
July.....	87.4	100.1	December.....	97.5	99.7
August.....	87.4	100.3	1938		
September.....	97.5	100.3	January.....	98.2	99.6
October.....	97.5	100.6	February.....	98.2	99.6
November.....	97.5	100.6	March.....	98.2	99.6
December.....	97.5	100.6	April.....	98.2	99.6
1936			May.....	98.2	99.6
January.....	97.5	100.6	June.....	98.2	99.5
February.....	97.5	100.6	July.....	98.2	99.8
March.....	97.5	100.6	August.....	98.2	99.8
April.....	97.5	100.6	September.....	98.2	99.8
May.....	97.5	100.6	October.....	98.2	99.8
June.....	97.5	100.6	November.....	98.2	99.8
July.....	97.5	100.6	December.....	98.2	99.8
August.....	97.5	100.6	1939		
September.....	97.5	100.6	January.....	98.2	99.9
October.....	97.5	100.6	February.....	98.2	99.9
November.....	97.5	100.6	March.....	98.2	99.9
December.....	99.7	100.5	April.....	98.2	99.9
1937			May.....	98.2	99.9
January.....	99.7	100.5	June.....	98.2	99.9
February.....	99.7	100.5	July.....	98.2	99.9
March.....	99.7	100.5	August.....	98.2	99.9
April.....	97.5	100.0	September.....	103.9	100.1
May.....	97.5	100.0			

Specification: Varnish, interior, mixed, first quality; per gallon in gallon cans.

Wholesale: Manufacturer to wholesale dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 94.—*Interior varnish*

REGION I. NEW ENGLAND

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole- sale	Retail		Whole- sale	Retail
1935			1937—Continued		
January.....	87.5	107.7	June.....	97.6	100.0
February.....	87.5	107.7	July.....	97.6	100.0
March.....	87.5	107.7	August.....	97.6	100.0
April.....	87.5	107.7	September.....	97.6	100.0
May.....	87.5	107.7	October.....	97.6	100.0
June.....	87.5	107.7	November.....	97.6	100.0
July.....	87.5	107.7	December.....	97.6	100.0
August.....	87.5	107.7	1938		
September.....	97.6	107.7	January.....	98.3	100.0
October.....	97.6	107.7	February.....	98.3	100.0
November.....	97.6	107.7	March.....	98.3	100.0
December.....	97.6	107.7	April.....	98.3	100.0
1936			May.....	98.3	100.0
January.....	97.6	107.7	June.....	98.3	100.0
February.....	97.6	107.7	July.....	98.3	100.0
March.....	97.6	107.7	August.....	98.3	100.0
April.....	97.6	107.7	September.....	98.3	100.0
May.....	97.6	107.7	October.....	98.3	100.0
June.....	97.6	107.7	November.....	98.3	100.0
July.....	97.6	107.7	December.....	98.3	100.0
August.....	97.6	107.7	1939		
September.....	97.6	107.7	January.....	98.3	100.0
October.....	97.6	107.7	February.....	98.3	100.0
November.....	97.6	107.7	March.....	98.3	100.0
December.....	99.7	107.7	April.....	98.3	100.0
1937			May.....	98.3	100.0
January.....	99.7	102.2	June.....	98.3	100.0
February.....	99.7	102.2	July.....	98.3	100.0
March.....	99.7	102.2	August.....	98.3	100.0
April.....	97.6	102.2	September.....	103.8	100.0
May.....	97.6	100.0			

Specification: Varnish, interior, mixed, first quality; per gallon in gallon cans.

Wholesale: Manufacturer to wholesale dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 95.—*Interior varnish*

REGION II. MIDDLE ATLANTIC

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	87.3	-----	June.....	97.5	100.0
February.....	87.3	-----	July.....	97.5	100.0
March.....	87.3	-----	August.....	97.5	100.0
April.....	87.3	-----	September.....	97.5	100.0
May.....	87.3	-----	October.....	97.5	100.0
June.....	87.3	-----	November.....	97.5	100.0
July.....	87.3	-----	December.....	97.5	100.0
August.....	87.3	-----	1938		
September.....	97.5	-----	January.....	98.2	100.0
October.....	97.5	-----	February.....	98.2	100.0
November.....	97.5	-----	March.....	98.2	100.0
December.....	97.5	-----	April.....	98.2	100.0
1936			May.....	98.2	100.0
January.....	97.5	-----	June.....	98.2	100.0
February.....	97.5	-----	July.....	98.2	100.0
March.....	97.5	-----	August.....	98.2	100.0
April.....	97.5	-----	September.....	98.2	100.0
May.....	97.5	-----	October.....	98.2	100.0
June.....	97.5	-----	November.....	98.2	100.0
July.....	97.5	-----	December.....	98.2	100.0
August.....	97.5	-----	1939		
September.....	97.5	-----	January.....	98.2	100.0
October.....	97.5	-----	February.....	98.2	100.0
November.....	97.5	-----	March.....	98.2	100.0
December.....	99.6	-----	April.....	98.2	100.0
1937			May.....	98.2	100.0
January.....	99.6	100.0	June.....	98.2	100.0
February.....	99.6	100.0	July.....	98.2	100.0
March.....	99.6	100.0	August.....	98.2	100.0
April.....	97.5	100.0	September.....	103.9	100.0
May.....	97.5	100.0			

Specification: Varnish, interior, mixed, first quality; per gallon in gallon cans.

Wholesale: Manufacturer to wholesale dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 96.—*Interior varnish*

REGION III. EAST NORTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	87.3	100.6	June.....	97.5	100.0
February.....	87.3	100.6	July.....	97.5	100.0
March.....	87.3	100.6	August.....	97.5	100.0
April.....	87.3	100.6	September.....	97.5	100.0
May.....	87.3	100.6	October.....	97.5	100.0
June.....	87.3	100.6	November.....	97.5	100.0
July.....	87.3	100.6	December.....	97.5	100.0
August.....	87.3	100.6	1938		
September.....	97.5	100.6	January.....	98.2	100.0
October.....	97.5	100.6	February.....	98.2	100.0
November.....	97.5	100.6	March.....	98.2	100.0
December.....	97.5	100.6	April.....	98.2	100.0
1936			May.....	98.2	100.0
January.....	97.5	100.6	June.....	98.2	100.0
February.....	97.5	100.6	July.....	98.2	100.0
March.....	97.5	100.6	August.....	98.2	100.0
April.....	97.5	100.6	September.....	98.2	100.0
May.....	97.5	100.6	October.....	98.2	100.0
June.....	97.5	100.6	November.....	98.2	100.0
July.....	97.5	100.6	December.....	98.2	100.0
August.....	97.5	100.6	1939		
September.....	97.5	100.6	January.....	98.2	100.0
October.....	97.5	100.6	February.....	98.2	100.0
November.....	97.5	100.6	March.....	98.2	100.0
December.....	99.6	100.6	April.....	98.2	100.0
1937			May.....	98.2	100.0
January.....	99.6	100.6	June.....	98.2	100.0
February.....	99.6	100.6	July.....	98.2	100.0
March.....	99.6	100.6	August.....	98.2	100.0
April.....	97.5	100.0	September.....	103.9	100.0
May.....	97.5	100.0			

Specification: Varnish, interior, mixed, first quality; per gallon in gallon cans.

Wholesale: Manufacturer to wholesale dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 97.—*Interior varnish*

REGION IV. WEST NORTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	87.5	100.6	June.....	97.6	99.2
February.....	87.5	100.6	July.....	97.6	99.2
March.....	87.5	100.6	August.....	97.6	99.2
April.....	87.5	100.6	September.....	97.6	99.2
May.....	87.5	100.6	October.....	97.6	99.2
June.....	87.5	100.6	November.....	97.6	99.2
July.....	87.5	100.6	December.....	97.6	99.2
August.....	87.5	100.6			
September.....	97.6	100.6	1938		
October.....	97.6	100.6	January.....	98.3	100.0
November.....	97.6	100.6	February.....	98.3	100.0
December.....	97.6	100.6	March.....	98.3	100.0
1936			April.....	98.3	100.0
January.....	97.6	100.6	May.....	98.3	100.0
February.....	97.6	100.6	June.....	98.3	100.0
March.....	97.6	100.6	July.....	98.3	100.0
April.....	97.6	100.6	August.....	98.3	100.0
May.....	97.6	100.6	September.....	98.3	100.0
June.....	97.6	100.6	October.....	98.3	100.0
July.....	97.6	100.6	November.....	98.3	100.0
August.....	97.6	100.6	December.....	98.3	100.0
September.....	97.6	100.6			
October.....	97.6	100.6	1939		
November.....	97.6	100.6	January.....	98.3	100.0
December.....	99.7	100.1	February.....	98.3	100.0
1937			March.....	98.3	100.0
January.....	99.7	100.1	April.....	98.3	100.0
February.....	99.7	100.1	May.....	98.3	100.0
March.....	99.7	100.8	June.....	98.3	100.0
April.....	97.6	99.2	July.....	98.3	100.0
May.....	97.6	99.2	August.....	98.3	100.0
			September.....	103.8	100.0

Specification: Varnish, interior, mixed, first quality; per gallon in gallon cans.

Wholesale: Manufacturer to wholesale dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 98.—*Interior varnish*

REGION V. SOUTH ATLANTIC

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	87.5	99.6	June.....	97.6	100.2
February.....	87.5	99.6	July.....	97.6	100.2
March.....	87.5	99.6	August.....	97.6	100.2
April.....	87.5	99.6	September.....	97.6	100.2
May.....	87.5	99.6	October.....	97.6	100.2
June.....	87.5	99.6	November.....	97.6	100.2
July.....	87.5	99.6	December.....	97.6	100.2
August.....	87.5	99.6	1938		
September.....	97.6	99.6	January.....	98.3	99.5
October.....	97.6	99.6	February.....	98.3	99.5
November.....	97.6	99.6	March.....	98.3	99.5
December.....	97.6	99.6	April.....	98.3	99.5
1936			May.....	98.3	99.5
January.....	97.6	99.6	June.....	98.3	99.5
February.....	97.6	99.6	July.....	98.3	99.5
March.....	97.6	99.6	August.....	98.3	99.5
April.....	97.6	99.6	September.....	98.3	99.5
May.....	97.6	99.6	October.....	98.3	99.5
June.....	97.6	99.6	November.....	98.3	99.5
July.....	97.6	99.6	December.....	98.3	99.5
August.....	97.6	99.6	1939		
September.....	97.6	99.6	January.....	98.3	99.5
October.....	97.6	99.6	February.....	98.3	99.5
November.....	97.6	99.6	March.....	98.3	99.5
December.....	99.7	99.6	April.....	98.3	99.5
1937			May.....	98.3	99.5
January.....	99.7	100.3	June.....	98.3	99.5
February.....	99.7	100.3	July.....	98.3	99.5
March.....	99.7	100.3	August.....	98.3	99.5
April.....	97.6	100.3	September.....	103.8	101.0
May.....	97.6	100.2			

Specification: Varnish, interior, mixed, first quality; per gallon in gallon cans.

Wholesale: Manufacturer to wholesale dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 99.—*Interior varnish*

REGION VI. EAST SOUTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Wholesale	Retail		Wholesale	Retail
1935			1937—Continued		
January.....	87.6	108.7	June.....	97.6	102.9
February.....	87.6	108.7	July.....	97.6	102.9
March.....	87.6	108.7	August.....	97.6	102.9
April.....	87.6	108.7	September.....	97.6	102.9
May.....	87.6	108.7	October.....	97.6	102.9
June.....	87.6	108.7	November.....	97.6	102.9
July.....	87.6	108.7	December.....	97.6	102.9
August.....	87.6	108.7	1938		
September.....	97.6	108.7	January.....	98.3	100.0
October.....	97.6	108.7	February.....	98.3	100.0
November.....	97.6	108.7	March.....	98.3	100.0
December.....	97.6	108.7	April.....	98.3	100.0
1936			May.....	98.3	100.0
January.....	97.6	108.7	June.....	98.3	100.0
February.....	97.6	108.7	July.....	98.3	100.0
March.....	97.6	108.7	August.....	98.3	100.0
April.....	97.6	108.7	September.....	98.3	100.0
May.....	97.6	108.7	October.....	98.3	100.0
June.....	97.6	108.7	November.....	98.3	100.0
July.....	97.6	108.7	December.....	98.3	100.0
August.....	97.6	108.7	1939		
September.....	97.6	108.7	January.....	98.3	100.0
October.....	97.6	108.7	February.....	98.3	100.0
November.....	97.6	108.7	March.....	98.3	100.0
December.....	99.7	108.7	April.....	98.3	100.0
1937			May.....	98.3	100.0
January.....	99.7	108.7	June.....	98.3	100.0
February.....	99.7	108.7	July.....	98.3	100.0
March.....	99.7	108.7	August.....	98.3	100.0
April.....	97.6	102.9	September.....	103.8	100.0
May.....	97.6	102.9			

Specification: Varnish, interior, mixed, first quality; per gallon in gallon cans.

Wholesale: Manufacturer to wholesale dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 100.—*Interior varnish*

REGION VII. WEST SOUTH CENTRAL

[Wholesale and retail price indexes—July-September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	87.8	107.4	June.....	97.6	104.4
February.....	87.8	107.4	July.....	97.6	104.4
March.....	87.8	107.4	August.....	97.6	104.4
April.....	87.8	107.4	September.....	97.6	104.4
May.....	87.8	107.4	October.....	97.6	99.6
June.....	87.8	107.4	November.....	97.6	99.6
July.....	87.3	107.4	December.....	97.6	99.6
August.....	87.8	107.4	1938		
September.....	97.6	107.4	January.....	98.3	99.6
October.....	97.6	107.4	February.....	98.3	99.6
November.....	97.6	107.4	March.....	98.3	99.6
December.....	97.6	107.4	April.....	98.3	99.6
1936			May.....	98.3	99.6
January.....	97.6	107.4	June.....	98.3	99.6
February.....	97.6	107.4	July.....	98.3	99.6
March.....	97.6	107.4	August.....	98.3	99.6
April.....	97.6	107.4	September.....	98.3	99.6
May.....	97.6	107.4	October.....	98.3	99.5
June.....	97.6	107.4	November.....	98.3	99.5
July.....	97.6	107.4	December.....	98.3	99.5
August.....	97.6	107.4	1939		
September.....	97.6	107.4	January.....	98.3	100.0
October.....	97.6	107.4	February.....	98.3	100.0
November.....	97.6	107.4	March.....	98.3	100.0
December.....	99.7	107.4	April.....	98.3	100.0
1937			May.....	98.3	100.0
January.....	99.7	107.4	June.....	98.3	100.0
February.....	99.7	107.4	July.....	98.3	100.0
March.....	99.7	107.4	August.....	98.3	100.0
April.....	97.6	104.4	September.....	103.7	100.0
May.....	97.6	104.4			

Specification: Varnish, interior, mixed, first quality; per gallon in gallon cans.

Wholesale: Manufacturer to wholesale dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 101.—*Interior varnish*

REGION VIII. ROCKY MOUNTAIN

[Wholesale and retail price indexes—July-September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January	87.9	93.7	June	97.7	100.9
February	87.9	93.7	July	97.7	100.9
March	87.9	93.7	August	97.7	100.9
April	87.9	93.7	September	97.7	100.9
May	87.9	93.7	October	97.7	100.9
June	87.9	93.7	November	97.7	100.9
July	87.9	93.7	December	97.7	100.9
August	87.9	98.1			
September	97.7	98.1	1938		
October	97.7	100.5	January	98.3	100.9
November	97.7	100.5	February	98.3	100.9
December	97.7	100.5	March	98.3	100.9
			April	98.3	100.9
1936			May	98.3	100.9
January	97.7	100.5	June	98.3	99.1
February	97.7	100.5	July	98.3	99.1
March	97.7	100.5	August	98.3	99.1
April	97.7	100.2	September	98.3	99.1
May	97.7	100.2	October	98.3	99.1
June	97.7	100.2	November	98.3	99.1
July	97.7	100.2	December	98.3	99.1
August	97.7	100.2			
September	97.7	100.2	1939		
October	97.7	100.2	January	98.3	99.1
November	97.7	100.2	February	98.3	99.1
December	99.7	100.2	March	98.3	99.1
			April	98.3	99.1
1937			May	98.3	100.0
January	99.7	100.2	June	98.3	100.0
February	99.7	100.2	July	98.3	100.0
March	99.7	100.2	August	98.3	100.0
April	97.7	100.9	September	103.7	100.0
May	97.7	100.9			

Specification: Varnish, interior, mixed, first quality; per gallon in gallon cans.

Wholesale: Manufacturer to wholesale dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 102.— *Interior varnish*

REGION IX. PACIFIC

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January	87.3	95.9	June	97.5	96.7
February	87.3	95.9	July	97.5	96.7
March	87.3	95.9	August	97.5	96.7
April	87.3	95.9	September	97.5	96.7
May	87.3	95.9	October	97.5	96.7
June	87.3	95.9	November	97.5	96.7
July	87.3	95.9	December	97.5	96.7
August	87.3	95.9			
September	97.5	95.9	1938		
October	97.5	97.0	January	98.2	96.7
November	97.5	97.0	February	98.2	96.7
December	97.5	97.0	March	98.2	96.7
1936			April	98.2	96.7
January	97.5	96.7	May	98.2	96.7
February	97.5	96.7	June	98.2	96.7
March	97.5	96.7	July	98.2	99.5
April	97.5	96.7	August	98.2	99.5
May	97.5	96.7	September	98.2	99.5
June	97.5	96.7	October	98.2	99.5
July	97.5	96.7	November	98.2	99.5
August	97.5	96.7	December	98.2	99.5
September	97.5	96.7			
October	97.5	96.7	1939		
November	97.5	96.7	January	98.2	99.5
December	99.6	96.7	February	98.2	99.5
1937			March	98.2	99.5
January	99.6	96.7	April	98.2	99.5
February	99.6	96.7	May	98.2	99.5
March	99.6	96.7	June	98.2	99.5
April	97.5	96.7	July	98.2	100.0
May	97.5	96.7	August	98.2	100.0
			September	103.9	100.0

Specification: Varnish, interior, mixed, first quality; per gallon in gallon cans.

Wholesale: Manufacturer to wholesale dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

CHAPTER IX

WHITE LEAD

DESCRIPTION OF THE INDUSTRY

The oldest known white pigment, white lead, is commonly used in high grade exterior paints in combination with zinc oxide and extenders.¹ It is also used extensively in combination with linseed oil and turpentine by painters who mix on the job.

In 1937, 144,313,029 pounds of white lead were produced in the United States, valued at \$9,450,759. This constituted about 50 percent of the total value of products classified by the Bureau of the Census as "Paints in Paste Form."² In 1935, 90.6 percent of the value of all white lead sold was produced by the four largest firms.

PRICE STRUCTURE

White lead is sold almost exclusively through the dealer channel to painters. It is marketed in kegs of 100, 50, 25, and 12½ pound weights. A one-fourth cent differential is maintained for each successively smaller quantity. The majority of sales are in 100-pound kegs. Most paint dealers in the country have an agency contract with one or another of the large white lead producers. The agency contract provides for sales on a consignment basis, with payment to the manufacturer being made as the product moves from the shelves of the dealer, and with retail prices determined by the producing company. Price lists are furnished by the manufacturer.

With fixed differentials between prices paid by dealers, painters, and "over-the-counter" trade, and prices enforced through the agency contract, wholesale prices are set on a zone basis. With prices uniform throughout each zone, differentials between zones vary from one-eighth cent to 1½ cents.

PRICE LEVELS AND TRENDS

Geographical Differences.

In September 1939, all wholesale prices in the cities studied were within a range of 9¼ and 10¾ cents per pound. Retail prices ranged from 11¼ to 12¾ cents per pound.

Twenty of the 50 cities were in "par" zones, where the wholesale price of 9¼ cents prevailed. Prices at wholesale were 10 cents or less in 45 of the 50 cities. In the 20 cities in "par" territory, the retail price was 11¼ cents. In 41 cities, the retail price was 12 cents or less. Highest prices both at retail (12¾ cents) and wholesale (10¾ cents) were found in certain cities in the Rocky Mountain area.

¹ Any colorless pigment that gives relatively low opacity when ground in oil.

² Census of Manufactures, 1937: "Paints, pigments, and varnishes," p. 735.

In all but 8 cities, a 2 cent per pound mark-up was provided for dealers on sales to painters. In the remainder, dealers enjoyed a 2½ cent mark-up per pound. Stated in percentage terms, the mark-up varied between 19 percent and 26 percent. The most typical wholesale price was 9¼ cents per pound and the most typical retail price was 11¼ cents per pound. The typical mark-up was 2 cents, or 22 percent.

No significant geographical differentials either in price levels or margins were apparent as of September 1939. Averages for the individual regions varied between 9¼ and 10½ cents per pound at wholesale and 11¼ and 12½ cents per pound at retail. Price mark-ups varied between 20 percent and 26 percent. The highest prices and highest margins appeared in the Rocky Mountain and Pacific regions.

Regions	Average of typical prices		Difference	
	Wholesale	Retail	Cents	Percent
I. New England.....	\$0.0925	\$0.1125	\$0.0200	21.6
II. Middle Atlantic.....	.0925	.1125	.0200	21.6
III. East North Central.....	.0925	.1125	.0200	21.6
IV. West North Central.....	.0941	.1141	.0200	21.3
V. South Atlantic.....	.0943	.1143	.0200	21.2
VI. East South Central.....	.0950	.1150	.0200	21.1
VII. West South Central.....	.0980	.1180	.0200	20.4
VIII. Rocky Mountain.....	.1016	.1241	.0225	22.1
IX. Pacific.....	.0975	.1225	.0250	25.6
United States.....	.0956	.1163	.0207	21.7

Wholesale and Retail Price Trends. (See chart XIII and tables 103 to 112.)

Between 1935 and September 1939 (based on July-September 1939=100), the national composite index of the wholesale price of white lead fluctuated between 108 in the spring of 1937 and 89 in the spring of 1938. From 93 in January 1935, there was a minor decline early in 1935, a compensating recovery early in 1936. In the winter of 1936 and spring of 1937, prices advanced rapidly by 14 percent to a high of 108 for the period. Prices broke in August 1937 and a series of sharp reduction brought the index down to 89 in the spring of 1938, a decline of 18 percent. In the fall of 1938 and the early months of 1939, the price advanced 12 percent to a level which held through September of that year. Wholesale and retail prices in all regions followed the same general pattern.

CHART XIII
WHITE LEAD
 WHOLESALE AND RETAIL PRICE INDEXES
 JULY - SEPTEMBER 1939 = 100

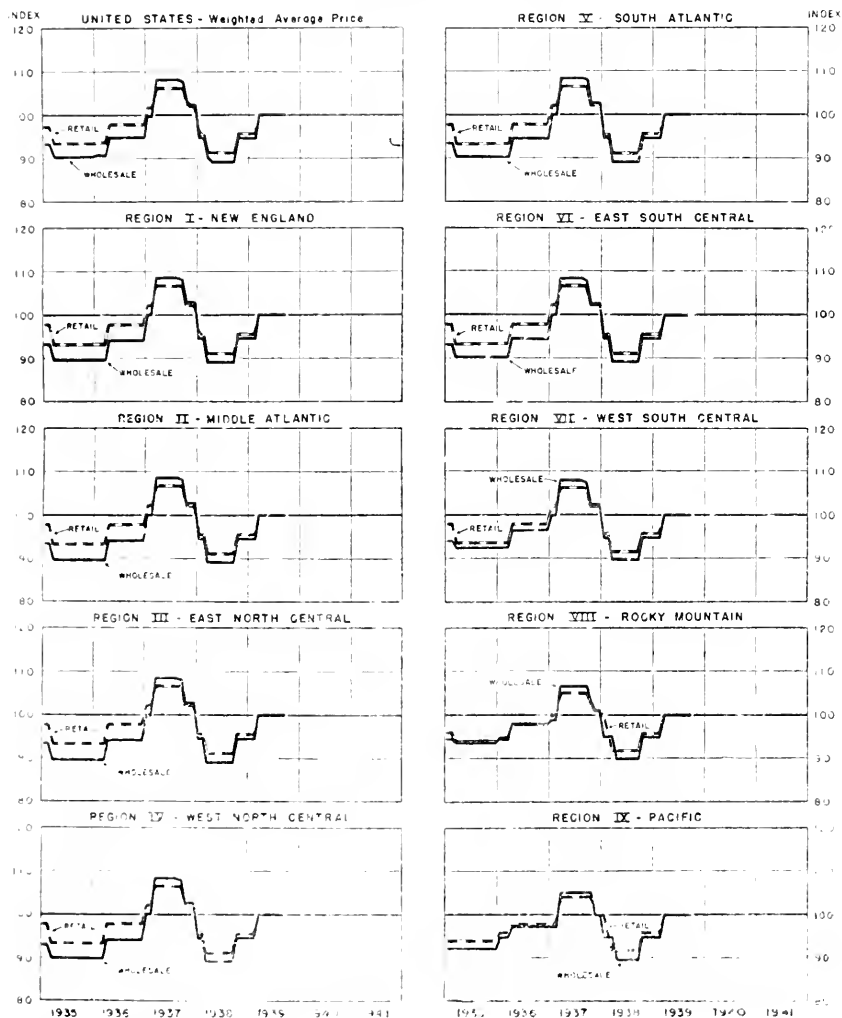


TABLE 103.—*White lead*

COMPOSITE. UNITED STATES AVERAGE

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	93.4	97.3	June.....	108.1	106.3
February.....	93.4	97.3	July.....	103.1	106.3
March.....	99.4	93.5	August.....	108.1	106.3
April.....	90.4	93.5	September.....	107.7	106.3
May.....	90.4	93.5	October.....	103.0	102.5
June.....	90.4	93.5	November.....	102.3	101.9
July.....	90.4	93.5	December.....	102.3	101.9
August.....	90.4	93.5	1938		
September.....	90.4	93.5	January.....	91.7	96.0
October.....	90.4	93.5	February.....	94.7	95.4
November.....	90.4	93.5	March.....	90.1	91.3
December.....	90.4	93.5	April.....	89.3	91.3
1936			May.....	89.3	91.3
January.....	90.7	93.7	June.....	89.3	91.3
February.....	90.7	93.7	July.....	89.3	91.3
March.....	90.7	93.7	August.....	89.3	91.3
April.....	94.8	97.8	September.....	89.3	91.3
May.....	94.8	97.8	October.....	94.7	95.7
June.....	94.8	97.8	November.....	94.7	95.7
July.....	94.8	97.8	December.....	94.7	95.7
August.....	94.8	97.8	1939		
September.....	94.8	97.8	January.....	94.7	95.7
October.....	94.8	97.8	February.....	94.7	95.7
November.....	94.8	97.8	March.....	100.0	100.0
December.....	94.8	97.8	April.....	100.0	100.0
1937			May.....	100.0	100.0
January.....	99.7	101.7	June.....	100.0	100.0
February.....	99.7	101.7	July.....	100.0	100.0
March.....	108.1	106.3	August.....	100.0	100.0
April.....	108.1	106.3	September.....	100.0	100.0
May.....	108.1	106.3			

Specification: Lead, white, carbonate, in oil, first quality; per pound, in kegs.

Wholesale: Producer to retail dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 104.—*White lead*

REGION I. NEW ENGLAND

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	93.4	97.8	June.....	108.6	106.7
February.....	93.4	97.8	July.....	108.6	106.7
March.....	89.7	93.3	August.....	108.6	106.7
April.....	89.7	93.3	September.....	108.1	106.7
May.....	89.7	93.3	October.....	102.7	102.2
June.....	89.7	93.3	November.....	102.7	102.2
July.....	89.7	93.3	December.....	102.7	102.2
August.....	89.7	93.3	1938		
September.....	89.7	93.3	January.....	94.6	95.6
October.....	89.7	93.3	February.....	94.6	95.6
November.....	89.7	93.3	March.....	89.2	91.1
December.....	89.7	93.3	April.....	89.2	91.1
1936			May.....	89.2	91.1
January.....	89.7	93.3	June.....	89.2	91.1
February.....	89.7	93.3	July.....	89.2	91.1
March.....	89.7	93.3	August.....	89.2	91.1
April.....	94.1	97.8	September.....	89.2	91.1
May.....	94.1	97.8	October.....	94.6	95.6
June.....	94.1	97.8	November.....	94.6	95.6
July.....	94.1	97.8	December.....	94.6	95.6
August.....	94.1	97.8	1939		
September.....	94.1	97.8	January.....	94.6	95.6
October.....	94.1	97.8	February.....	94.6	95.6
November.....	94.1	97.8	March.....	100.0	100.0
December.....	94.1	97.8	April.....	100.0	100.0
1937			May.....	100.0	100.0
January.....	100.0	102.2	June.....	100.0	100.0
February.....	100.0	102.2	July.....	100.0	100.0
March.....	108.6	106.7	August.....	100.0	100.0
April.....	108.6	106.7	September.....	100.0	100.0
May.....	108.6	106.7			

Specification: Lead, white, carbonate, in oil, first quality; per pound, in kegs.

Wholesale: Producer to retail dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 105.—*White lead*

REGION II. MIDDLE ATLANTIC

[Wholesale and retail price indexes—July–September 1939 = 100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	93.4	97.8	June.....	108.6	106.7
February.....	93.4	97.8	July.....	108.6	106.7
March.....	89.7	93.3	August.....	108.6	106.7
April.....	89.7	93.3	September.....	108.1	106.7
May.....	89.7	93.3	October.....	102.7	102.2
June.....	89.7	93.3	November.....	102.7	102.2
July.....	89.7	93.3	December.....	102.7	102.2
August.....	89.7	93.3			
September.....	89.7	93.3	1938		
October.....	89.7	93.3	January.....	94.6	95.6
November.....	89.7	93.3	February.....	94.6	95.6
December.....	89.7	93.3	March.....	89.2	91.1
			April.....	89.2	91.1
1936			May.....	89.2	91.1
January.....	89.7	93.3	June.....	89.2	91.1
February.....	89.7	93.3	July.....	89.2	91.1
March.....	89.7	93.3	August.....	89.2	91.1
April.....	94.1	97.8	September.....	89.2	91.1
May.....	94.1	97.8	October.....	94.6	95.6
June.....	94.1	97.8	November.....	94.6	95.6
July.....	94.1	97.8	December.....	94.6	95.6
August.....	94.1	97.8			
September.....	94.1	97.8	1939		
October.....	94.1	97.8	January.....	94.6	95.6
November.....	94.1	97.8	February.....	94.6	95.6
December.....	94.1	97.8	March.....	100.0	100.0
			April.....	100.0	100.0
1937			May.....	100.0	100.0
January.....	100.0	102.2	June.....	100.0	100.0
February.....	100.0	102.2	July.....	100.0	100.0
March.....	108.6	106.7	August.....	100.0	100.0
April.....	108.6	106.7	September.....	100.0	100.0
May.....	108.6	106.7			

Specification: Lead, white, carbonate, in oil, first quality; per pound, in kegs.

Wholesale: Producer to retail dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 106.—*White lead*

REGION III. EAST NORTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	93.4	97.8	June.....	108.6	106.7
February.....	93.4	97.8	July.....	108.6	106.7
March.....	89.7	93.3	August.....	108.6	106.7
April.....	89.7	93.3	September.....	108.1	106.7
May.....	89.7	93.3	October.....	102.7	102.2
June.....	89.7	93.3	November.....	102.7	102.2
July.....	89.7	93.3	December.....	102.7	102.2
August.....	89.7	93.3			
September.....	89.7	93.3	1938		
October.....	89.7	93.3	January.....	94.6	95.6
November.....	89.7	93.3	February.....	94.6	95.6
December.....	89.7	93.3	March.....	89.2	91.1
1936			April.....	89.2	91.1
January.....	89.7	93.3	May.....	89.2	91.1
February.....	89.7	93.3	June.....	89.2	91.1
March.....	89.7	93.3	July.....	89.2	91.1
April.....	94.1	97.8	August.....	89.2	91.1
May.....	94.1	97.8	September.....	89.2	91.1
June.....	94.1	97.8	October.....	94.6	95.6
July.....	94.1	97.8	November.....	94.6	95.6
August.....	94.1	97.8	December.....	94.6	95.6
September.....	94.1	97.8			
October.....	94.1	97.8	1939		
November.....	94.1	97.8	January.....	94.6	95.6
December.....	94.1	97.8	February.....	94.6	95.6
1937			March.....	100.0	100.0
January.....	100.0	102.2	April.....	100.0	100.0
February.....	100.0	102.2	May.....	100.0	100.0
March.....	108.6	106.7	June.....	100.0	100.0
April.....	108.6	106.7	July.....	100.0	100.0
May.....	108.6	106.7	August.....	100.0	100.0
			September.....	100.0	100.0

Specification: Lead, white carbonate, in oil, first quality; per pound, in kegs.

Wholesale: Producer to retail dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 107.—*White lead*

REGION IV. WEST NORTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January	93.2	97.8	June	108.5	106.6
February	93.2	97.8	July	108.5	106.6
March	89.9	93.4	August	108.5	106.6
April	89.9	93.4	September	108.0	106.6
May	89.9	93.4	October	102.7	102.2
June	89.9	93.4	November	102.7	102.2
July	89.9	93.4	December	102.7	102.2
August	89.9	93.4			
September	89.9	93.4	1938		
October	89.9	93.4	January	94.7	95.6
November	89.9	93.4	February	94.7	95.6
December	89.9	93.4	March	89.3	91.2
			April	89.3	91.2
1936			May	89.3	91.2
January	89.9	93.4	June	89.3	91.2
February	89.9	93.4	July	89.3	91.2
March	89.9	93.4	August	89.3	91.2
April	94.1	97.8	September	89.3	91.2
May	94.1	97.8	October	94.7	95.6
June	94.1	97.8	November	94.7	95.6
July	94.1	97.8	December	94.7	95.6
August	94.1	97.8			
September	94.1	97.8	1939		
October	94.1	97.8	January	94.7	95.6
November	94.1	97.8	February	94.7	95.6
December	94.1	97.8	March	100.0	100.0
			April	100.0	100.0
1937			May	100.0	100.0
January	100.0	102.2	June	100.0	100.0
February	100.0	102.2	July	100.0	100.0
March	108.5	106.6	August	100.0	100.0
April	108.5	106.6	September	100.0	100.0
May	108.5	106.6			

Specification: Lead white, carbonate, in oil, first quality; per pound, in kegs.

Wholesale: Producer to retail dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 108.—*White lead*

REGION V. SOUTH ATLANTIC

{Wholesale and retail price indexes—July–September 1939=100.0}

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	93.5	97.8	June.....	108.5	105.6
February.....	93.5	97.8	July.....	108.5	106.6
March.....	90.3	93.4	August.....	108.5	106.6
April.....	90.3	93.4	September.....	108.0	106.6
May.....	90.3	93.4	October.....	102.7	102.2
June.....	90.3	93.4	November.....	102.7	102.2
July.....	90.3	93.4	December.....	102.7	102.2
August.....	90.3	93.4	1938		
September.....	90.3	93.4	January.....	94.7	95.6
October.....	90.3	93.4	February.....	94.7	95.6
November.....	90.3	93.4	March.....	89.3	91.0
December.....	90.3	93.4	April.....	89.3	91.0
1936			May.....	89.3	91.6
January.....	90.3	93.4	June.....	89.3	91.0
February.....	90.3	93.4	July.....	89.3	91.0
March.....	90.3	93.4	August.....	89.3	91.0
April.....	94.6	97.8	September.....	89.3	91.0
May.....	94.6	97.8	October.....	94.7	95.7
June.....	94.6	97.8	November.....	94.7	95.7
July.....	94.6	97.8	December.....	94.7	95.7
August.....	94.6	97.8	1939		
September.....	94.6	97.8	January.....	94.7	95.7
October.....	94.6	97.8	February.....	94.7	95.7
November.....	94.6	97.8	March.....	100.0	100.0
December.....	94.6	97.8	April.....	100.0	100.0
1937			May.....	100.0	100.0
January.....	100.0	102.2	June.....	100.0	100.0
February.....	100.0	102.2	July.....	100.0	100.0
March.....	108.5	106.6	August.....	100.0	100.0
April.....	108.5	106.6	September.....	100.0	100.0
May.....	108.5	106.6			

Specification: Lead, white, carbonate, in oil, first quality; per pound, in kegs.

Wholesale: Producer to retail dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 109.—*White lead*

REGION VI. EAST SOUTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	93.3	97.8	June.....	108.5	106.6
February.....	93.3	97.8	July.....	108.5	106.6
March.....	90.3	93.4	August.....	108.5	106.6
April.....	90.3	93.4	September.....	107.9	106.6
May.....	90.3	93.4	October.....	102.6	102.3
June.....	90.3	93.4	November.....	102.6	102.3
July.....	90.3	93.4	December.....	102.6	102.3
August.....	90.3	93.4	1938		
September.....	90.3	93.4	January.....	94.7	95.6
October.....	90.3	93.4	February.....	94.7	95.6
November.....	90.3	93.4	March.....	89.4	91.1
December.....	90.3	93.4	April.....	89.4	91.1
1936			May.....	89.4	91.1
January.....	90.3	93.4	June.....	89.4	91.1
February.....	90.3	93.4	July.....	89.4	91.1
March.....	90.3	93.4	August.....	89.4	91.1
April.....	94.5	97.8	September.....	89.4	91.1
May.....	94.5	97.8	October.....	94.7	95.6
June.....	94.5	97.8	November.....	94.7	95.6
July.....	94.5	97.8	December.....	94.7	95.6
August.....	94.5	97.8	1939		
September.....	94.5	97.8	January.....	94.7	95.6
October.....	94.5	97.8	February.....	94.7	95.6
November.....	94.5	97.8	March.....	100.0	100.0
December.....	94.5	97.8	April.....	100.0	100.0
1937			May.....	100.0	100.0
January.....	100.0	102.3	June.....	100.0	100.0
February.....	100.0	102.3	July.....	100.0	100.0
March.....	108.5	106.6	August.....	100.0	100.0
April.....	108.5	106.6	September.....	100.0	100.0
May.....	108.5	106.6			

Specification: Lead, white, carbonate, in oil, first quality; per pound, in kegs.

Wholesale: Producer to retail dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 110.—*White lead*

REGION VII. WEST SOUTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January	94.2	97.9	June	108.1	106.3
February	94.2	97.9	July	108.1	106.3
March	92.6	93.7	August	108.1	106.3
April	92.6	93.7	September	107.6	106.3
May	92.6	93.7	October	102.5	102.1
June	92.6	93.7	November	102.5	102.1
July	92.6	93.7	December	102.5	102.1
August	92.6	93.7	1938		
September	92.6	93.7	January	94.9	95.8
October	92.6	93.7	February	94.9	95.8
November	92.6	93.7	March	89.9	91.5
December	92.6	93.7	April	89.9	91.5
1936			May	89.9	91.5
January	92.6	93.7	June	89.9	91.5
February	92.6	93.7	July	89.9	91.5
March	92.6	93.7	August	89.9	91.5
April	96.7	97.9	September	89.9	91.5
May	96.7	97.9	October	94.9	95.8
June	96.7	97.9	November	94.9	95.8
July	96.7	97.9	December	94.9	95.8
August	96.7	97.9	1939		
September	96.7	97.9	January	94.9	95.8
October	96.7	97.9	February	94.9	95.8
November	96.7	97.9	March	100.0	100.0
December	96.7	97.9	April	100.0	100.0
1937			May	100.0	100.0
January	100.0	102.1	June	100.0	100.0
February	100.0	102.1	July	100.0	100.0
March	108.1	106.3	August	100.0	100.0
April	108.1	106.3	September	100.0	100.0
May	108.1	106.3			

Specification: Lead, white, carbonate, in oil, first quality; per pound, in kegs

Wholesale: Producer to retail dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 111.—*White lead*

REGION VIII. ROCKY MOUNTAIN

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	94.6	96.2	June.....	106.7	105.2
February.....	94.6	96.2	July.....	106.7	105.2
March.....	93.7	93.9	August.....	106.7	105.2
April.....	93.7	93.9	September.....	106.4	105.2
May.....	93.7	93.9	October.....	103.2	102.9
June.....	93.7	93.9	November.....	101.4	101.1
July.....	93.7	93.9	December.....	101.4	101.1
August.....	93.7	93.9	1938		
September.....	93.7	93.9	January.....	95.0	97.7
October.....	93.7	93.9	February.....	95.0	95.9
November.....	93.7	93.9	March.....	95.2	91.8
December.....	93.7	93.9	April.....	90.0	91.8
1936			May.....	90.0	91.8
January.....	94.8	94.6	June.....	90.0	91.8
February.....	94.8	94.6	July.....	90.0	91.8
March.....	94.8	94.6	August.....	90.0	91.8
April.....	98.1	97.8	September.....	90.0	91.8
May.....	98.1	97.8	October.....	95.0	95.9
June.....	98.1	98.0	November.....	95.0	95.9
July.....	98.1	98.0	December.....	95.0	95.9
August.....	98.1	98.0	1939		
September.....	98.1	98.0	January.....	95.0	95.9
October.....	98.1	98.0	February.....	95.0	95.9
November.....	98.1	98.0	March.....	100.0	100.0
December.....	98.1	98.0	April.....	100.0	100.0
1937			May.....	100.0	100.0
January.....	98.9	100.1	June.....	100.0	100.0
February.....	98.9	99.3	July.....	100.0	100.0
March.....	106.7	105.2	August.....	100.0	100.0
April.....	106.7	105.2	September.....	100.0	100.0
May.....	106.7	105.2			

Specification: Lead, white, carbonate, in oil, first quality; per pound, in kegs.

Wholesale: Producer to retail dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 112.—*White lead*

REGION IX. PACIFIC

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	92.3	93.9	June.....	105.1	104.1
February.....	92.3	93.9	July.....	105.1	104.1
March.....	92.3	93.9	August.....	105.1	104.1
April.....	92.3	93.9	September.....	105.1	104.1
May.....	92.3	93.9	October.....	105.1	104.1
June.....	92.3	93.9	November.....	100.0	100.0
July.....	92.3	93.9	December.....	100.0	100.0
August.....	92.3	93.9	1938		
September.....	92.3	93.9	January.....	94.9	100.0
October.....	92.3	93.9	February.....	94.9	95.9
November.....	92.3	93.9	March.....	94.9	91.8
December.....	92.3	93.9	April.....	89.7	91.8
1936			May.....	89.7	91.8
January.....	94.9	95.9	June.....	89.7	91.8
February.....	94.9	95.9	July.....	89.7	91.8
March.....	94.9	95.9	August.....	89.7	91.8
April.....	97.4	98.0	September.....	89.7	91.8
May.....	97.4	98.0	October.....	94.9	96.0
June.....	97.4	98.0	November.....	94.9	96.0
July.....	97.4	98.0	December.....	94.9	96.0
August.....	97.4	98.0	1939		
September.....	97.4	98.0	January.....	94.9	96.0
October.....	97.4	98.0	February.....	94.9	96.0
November.....	97.4	98.0	March.....	100.0	100.0
December.....	97.4	98.0	April.....	100.0	100.0
1937			May.....	100.0	100.0
January.....	97.4	98.0	June.....	100.0	100.0
February.....	97.4	98.0	July.....	100.0	100.0
March.....	105.1	104.1	August.....	100.0	100.0
April.....	105.1	104.1	September.....	100.0	100.0
May.....	105.1	104.1			

Specification: Lead, white, carbonate, in oil, first quality; per pound, in kegs.

Wholesale: Producer to retail dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

CHAPTER X

LINSEED OIL

DESCRIPTION OF THE INDUSTRY

Linseed oil is one of many products obtained from the seed of flax. It is the most widely sold gumming and drying agent used in the manufacture of ready-mixed paints, and is also used extensively by contractors who mix paints on the job.

Twenty-three establishments in the linseed oil, cake, and meal industry employed 2,628 wage earners in 1937 and turned out products valued at \$90,000,000. In 1929, products valued at \$111,000,000 were manufactured by 29 establishments. Since 1929 linseed oil production has averaged between 60 and 72 percent of the total value of the industry's output.¹

The industry is located in three major geographical areas. In 1937 there were nine establishments in New York, New Jersey, and Pennsylvania; nine in Minnesota, Illinois, Wisconsin, Ohio, and Kansas; and five in California and Oregon. Manufacturers generally sell to jobbers and the jobbers distribute to dealers, who service the contracting trade. In 1935, 35 percent of linseed oil manufacturers' sales went directly to industrial and other large users while 50 percent passed through wholesalers and jobbers.² The product is marketed in gallons, barrels, drums, and tank cars of 70 drums.

PRICE STRUCTURE

In the determination of wholesale prices the country is divided into zones.³ Prices are uniform for all destinations within each zone; differentials between zones are related to freight differentials. Wholesale prices are quoted per pound, but in the following analysis these have been converted to a gallon basis for purposes of comparison with retail prices. In the following section, wholesale prices are from manufacturer to jobber; retail prices are from dealer to painting contractor. Hence, the spreads between the two series represent the difference between manufacturers' prices and the prices paid by consumers and include the allowances for distribution through two channels, the jobbers and dealers.

¹ Census of Manufactures, 1937, "Oil, cake, and meal, linseed," p. 718 ff.

² Census of Business, 1935, "Oil, cake, and meal, linseed," p. 113.

³ One large manufacturer uses eight zones in pricing his product.

PRICE LEVELS AND TRENDS

Geographical Differences in Prices ⁴ and Spreads. (See table 113.)

Wholesale and retail price levels as of September 1939, for cities from which both wholesale and retail prices were reported, are shown in the following summary:

Price range per gallon	Number of cities		Price range per gallon	Number of cities	
	Whole-sale	Retail		Whole-sale	Retail
\$0.71 to \$0.75.....	24	-----	\$0.96 to \$1.....	-----	16
\$0.76 to \$0.80.....	24	-----	\$1.01 to \$1.05.....	-----	10
\$0.81 to \$0.85.....	-----	2	\$1.06 to \$1.10.....	-----	4
\$0.86 to \$0.90.....	-----	6	\$1.11 and above.....	-----	1
\$0.91 to \$0.95.....	-----	9			

Few significant regional differentials are revealed in either wholesale or retail price levels. All wholesale prices fell within a range of from 71 to 80 cents per gallon. Sixteen of the 48 cities reported retail prices from 96 cents to \$1 per gallon, the most typical range. Thirty-one cities reported retail prices ranging from 86 cents to \$1 and only five cities showed prices in excess of \$1.05 per gallon.

Retail mark-ups in linseed oil varied from 12 percent in Omaha, Nebr., and Charleston, S. C., to 57 percent in Charlotte, N. C., and Atlanta, Ga. In 34 of the 48 cities retail spreads were between 21 and 35 percent, the most typical group being 31 to 35 percent.

Percent mark-up	Number of cities	Percent mark-up	Number of cities
10 to 15.....	4	31 to 35.....	14
16 to 20.....	2	36 to 40.....	2
21 to 25.....	10	41 and over.....	6
26 to 30.....	10	Total.....	48

Regional average mark-ups varied from 24 to 35 percent. Average spreads of 34 and 35 percent were reported in the West South Central and the South Atlantic regions, respectively, which were also the areas in which prices were most stable. Excluding these two areas, the regional average spreads varied from 24 to 28 percent.

Regions	Typical wholesale price	Typical retail price	Difference	
			Cents	Percent
I. New England.....	\$0.7500	\$0.9567	\$0.2067	27.6
II. Middle Atlantic.....	.7500	.9300	.1800	24.0
III. East North Central.....	.7500	.9550	.2050	27.3
IV. West North Central.....	.7629	.9514	.1885	24.7
V. South Atlantic.....	.7425	1.0025	.2600	35.0
VI. East South Central.....	.7650	.9575	.1925	25.2
VII. West South Central.....	.7760	1.0400	.2640	34.0
VIII. Rocky Mountain.....	.7900	1.0063	.2163	27.4
IX. Pacific.....	.8000	1.0100	.2100	26.3
United States average.....	.7644	.9821	.2177	28.5

⁴ Linseed oil was priced per pound at wholesale and per gallon at retail. For the purpose of comparison, wholesale prices were converted to a per gallon basis.

Price trends. (See chart XIV and tables 114 to 123.)

With costs of materials constituting 80 percent of the total value of the product, the wholesale price of linseed oil follows closely the price of flax, the principal raw material. A "market" commodity, linseed oil prices are sensitive to changes in production and in general business conditions. With price changes reported in almost every month, the wholesale price index for the Nation as a whole ranged from 92 to 124 (based on July to September 1939=100) in the period from 1935 through September 1939. In the summer of 1935 the index dropped from 107 to 92, but climbed to 111 by the end of the year. Following a decline to 104 in the spring of 1936, the index rose to 116 in late summer of that year, fell to 106 in November, then resumed its advance to the peak of 124, which it reached in April and May 1937.

The rising trend was reversed in June 1937 and a series of declines culminated in August 1938 with a low of 91. The index then climbed slowly until June 1939 when it hit 103. A slight recession was followed by a jump of 15 percent, from 94 to 108, in September 1939, after the outbreak of war in August.

Since wholesale price differentials between zones remained constant throughout the period, the pattern of wholesale price behavior in all regions duplicated that for the Nation as a whole.

Retail prices of linseed oil followed wholesale prices closely in most regions. The national trend of composite retail prices was very similar to that of the wholesale index but without the extreme fluctuations. Thus, the sharp wholesale price rise in the spring of 1937 was not fully reflected in the retail index; nor were the sharp increases in the spring and winter of 1935 and in the summer of 1936 and the declines in the summer of 1935 and the spring of 1936 as marked in the retail as they were in the wholesale markets.

The national composite, however, is affected considerably by prices in the South Atlantic area, where the retail market was very stable. In the Middle Atlantic, East South Central, and West South Central areas, no adequate retail prices were obtained. In the remaining regions, however, retail indexes follow the wholesale very closely. Although retail prices tend to fluctuate more narrowly than wholesale prices in these regions, the tendency is not nearly so evident as in the national average.

CHART XIV
LINSEED OIL
WHOLESALE AND RETAIL PRICE INDEXES
JULY - SEPTEMBER 1939 = 100

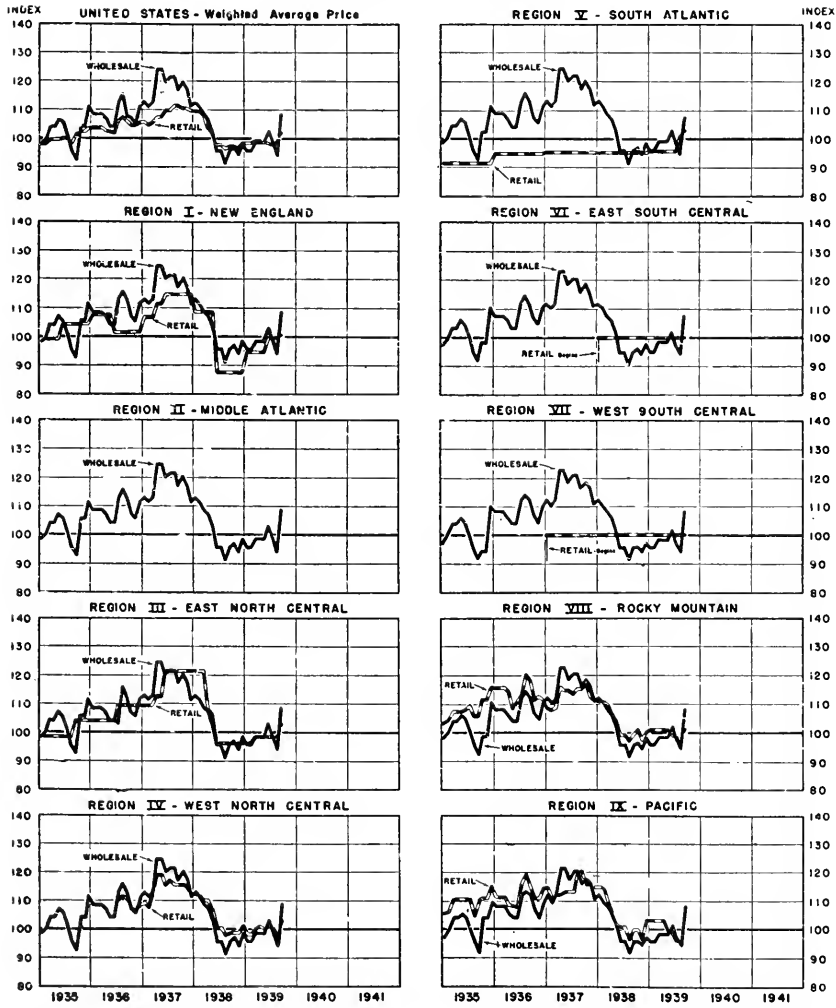


TABLE 113.—*Linseed oil*

[Typical wholesale and retail prices for selected cities, September 1939]

Region and city	Prices		Region and city	Prices	
	Whole-sale	Retail		Whole-sale	Retail
REGION I. NEW ENGLAND			REGION V. SOUTH ATLANTIC—CON.		
A. Portland, Maine.....	\$0.75	\$0.90	G. Charleston, S. C.....	.77	.86
B. Manchester, N. H.....	.75	.99	H. Atlanta, Ga.....	.70	1.10
C. Burlington, Vt.....	.75	1.00	I. Miami, Fla.....	.77	1.00
D. Boston, Mass.....	.75	.97	REGION VI. EAST SOUTH CENTRAL		
E. Providence, R. I.....	.75	.90	A. Louisville, Ky.....	.75	.85
F. Hartford, Conn.....	.75	.98	B. Memphis, Tenn.....	.77	.98
REGION II. MIDDLE ATLANTIC			C. Birmingham, Ala.....	.77	1.00
A. New York, N. Y.....	.75	.89	D. Jackson, Miss.....	.77	1.00
B. Trenton, N. J.....	.75	1.00	REGION VII. WEST SOUTH CENTRAL		
C. Philadelphia, Pa.....	.75	.90	A. Little Rock, Ark.....	.78	1.10
REGION III. EAST NORTH CENTRAL			B. Oklahoma City, Okla.....	.78	1.10
A. Cleveland, Ohio.....	.75	.94	C. Austin, Tex.....	.78	1.00
B. Detroit, Mich.....	.75	.95	D. Houston, Tex.....	.77	1.00
C. Indianapolis, Ind.....	.75	.92	E. New Orleans, La.....	.77	1.00
E. Milwaukee, Wis.....	.75	1.01	REGION VIII. ROCKY MOUNTAIN		
REGION IV. WEST NORTH CENTRAL			A. Butte, Mont.....	.78	.96
A. Minneapolis, Minn.....	.75	1.02	B. Boise, Idaho.....	.80	1.05
B. Fargo, N. Dak.....	.78	.94	C. Cheyenne, Wyo.....	.78	.94
C. Sioux Falls, S. Dak.....	.78	1.00	D. Denver, Colo.....	.78	.97
D. Des Moines, Iowa.....	.75	1.03	E. Salt Lake City, Utah.....	.80	1.05
E. Omaha, Nebr.....	.75	.84	F. Reno, Nev.....	.80	.91
F. Wichita, Kans.....	.78	.93	G. Phoenix, Ariz.....	.80	1.01
G. St. Louis, Mo.....	.75	.90	H. Albuquerque, N. Mex.....	.78	1.19
REGION V. SOUTH ATLANTIC			REGION IX. PACIFIC		
A. Wilmington, Del.....	.75	1.00	A. Seattle, Wash.....	.80	1.01
B. Baltimore, Md.....	.75	.91	B. Portland, Oreg.....	.80	1.01
D. Charleston, W. Va.....	.75	1.00	C. Los Angeles, Calif.....	.80	1.01
E. Richmond, Va.....	.75	1.05			
F. Charlotte, N. C.....	.70	1.10			

Specification: Oil, linseed, raw.

Wholesale: Per gallon (converted from pound) in barrels, carlots, producer to retail dealer, f. o. b. cars destination.

Retail: Per gallon; dealer to contractor, delivered to job site, city.

TABLE 114.—*Linseed oil*

COMPOSITE UNITED STATES AVERAGE

Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	98.3	98.0	July.....	121.5	109.9
February.....	100.0	98.2	August.....	121.5	111.4
March.....	104.3	99.5	September.....	117.2	111.4
April.....	104.3	99.6	October.....	119.8	110.6
May.....	106.9	99.6	November.....	117.2	110.3
June.....	105.5	100.0	December.....	111.5	109.8
July.....	101.2	99.5	1938		
August.....	95.7	98.2	January.....	112.9	109.6
September.....	92.6	101.5	February.....	111.2	109.5
October.....	104.1	102.1	March.....	108.6	108.4
November.....	104.1	102.1	April.....	106.9	103.8
December.....	111.2	103.5	May.....	102.6	102.1
1936			June.....	95.7	97.8
January.....	108.6	103.6	July.....	95.7	97.8
February.....	108.6	103.5	August.....	91.4	96.6
March.....	108.6	103.5	September.....	95.7	97.4
April.....	106.9	102.7	October.....	96.9	97.5
May.....	104.2	102.2	November.....	94.4	96.7
June.....	104.3	101.9	December.....	93.3	98.3
July.....	112.9	106.2	1939		
August.....	115.5	107.5	January.....	95.7	98.5
September.....	107.9	106.2	February.....	95.7	98.5
October.....	107.2	104.6	March.....	98.6	99.2
November.....	105.5	104.6	April.....	98.6	99.3
December.....	111.2	105.6	May.....	98.6	98.5
1937			June.....	102.6	98.5
January.....	112.9	105.8	July.....	98.3	97.8
February.....	111.2	104.8	August.....	94.3	98.5
March.....	112.9	105.4	September.....	108.4	101.9
April.....	124.1	107.4			
May.....	124.1	107.6			
June.....	119.8	109.9			

Specification: Oil, linseed, raw.

Wholesale: Per pound, in barrels, carlots, producer to retail dealer, f. o. b. cars destination.

Retail: Per gallon; dealer to contractor, delivered to job site, city.

TABLE 115.—*Linseed oil*

REGION I. NEW ENGLAND

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	98.6	99.1	July.....	121.7	114.8
February.....	100.0	99.1	August.....	121.7	114.8
March.....	104.3	99.1	September.....	117.4	114.8
April.....	104.3	99.1	October.....	120.3	114.8
May.....	117.2	99.1	November.....	117.4	114.8
June.....	115.8	104.5	December.....	111.6	114.8
July.....	101.4	104.5	1938		
August.....	95.7	104.5	January.....	113.0	108.7
September.....	92.8	104.5	February.....	111.6	108.7
October.....	105.8	104.5	March.....	108.7	108.7
November.....	105.8	104.5	April.....	107.2	108.7
December.....	111.6	104.5	May.....	102.9	108.7
1936			June.....	95.7	87.5
January.....	108.7	107.8	July.....	95.7	87.5
February.....	108.7	107.8	August.....	91.3	87.5
March.....	108.7	107.8	September.....	95.7	87.5
April.....	107.2	107.8	October.....	97.1	87.5
May.....	104.3	107.8	November.....	94.2	87.5
June.....	104.3	101.7	December.....	98.6	87.5
July.....	113.0	101.7	1939		
August.....	115.9	101.7	January.....	95.7	94.6
September.....	113.0	101.7	February.....	95.7	94.6
October.....	107.2	101.7	March.....	98.6	94.6
November.....	105.8	101.7	April.....	98.6	94.6
December.....	111.6	101.7	May.....	98.6	94.6
1937			June.....	102.9	99.7
January.....	113.0	106.8	July.....	98.6	99.7
February.....	111.6	106.8	August.....	94.2	99.7
March.....	113.0	106.8	September.....	108.7	100.5
April.....	124.6	111.5			
May.....	124.6	111.5			
June.....	120.3	114.8			

Specification: Oil, linseed, raw.

Wholesale: Per pound, in barrels, carlots, producer to retail dealer, f. o. b. cars destination.

Retail: Per gallon; dealer to contractor, delivered to job site, city.

TABLE 116.—*Linseed oil*

REGION II. MIDDLE ATLANTIC

[Wholesale price indexes—July–September 1939=100.0]

Year and month	Whole-sale index	Year and month	Whole-sale index	Year and month	Whole-sale index
1935		1936—Continued		1938—Continued	
January.....	98.6	October.....	107.2	April.....	107.2
February.....	100.0	November.....	105.8	May.....	102.9
March.....	104.3	December.....	111.6	June.....	95.7
April.....	104.3			July.....	95.7
May.....	107.2	1937		August.....	91.3
June.....	105.8	January.....	113.0	September.....	95.7
July.....	101.4	February.....	111.6	October.....	97.1
August.....	95.7	March.....	113.0	November.....	94.2
September.....	92.8	April.....	124.6	December.....	98.6
October.....	105.8	May.....	124.6		
November.....	105.8	June.....	120.3	1939	
December.....	111.6	July.....	121.7	January.....	95.7
1936		August.....	121.7	February.....	95.7
January.....	108.7	September.....	117.4	March.....	98.6
February.....	108.7	October.....	120.3	April.....	98.6
March.....	108.7	November.....	117.4	May.....	98.6
April.....	107.2	December.....	111.6	June.....	102.9
May.....	104.3			July.....	98.6
June.....	104.3	1938		August.....	94.2
July.....	113.0	January.....	113.0	September.....	108.7
August.....	115.9	February.....	111.6		
September.....	113.0	March.....	108.7		

Specification: Oil, linseed, raw.

Wholesale: Per pound, in barrels, carlots, producer to retail dealer. f. o. b. cars' destination.

TABLE 117.—*Linseed oil*

REGION III. EAST NORTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	98.6	98.6	June.....	120.3	121.6
February.....	100.0	98.6	July.....	121.7	121.6
March.....	104.3	98.6	August.....	121.7	121.6
April.....	104.3	98.6	September.....	117.4	121.6
May.....	107.2	98.6	October.....	120.3	121.6
June.....	105.8	98.6	November.....	117.4	121.6
July.....	101.4	98.6	December.....	111.6	121.6
August.....	95.7	98.6			
September.....	92.8	104.1	1938		
October.....	105.8	104.1	January.....	113.0	121.6
November.....	105.8	104.1	February.....	111.6	121.6
December.....	111.6	134.1	March.....	108.7	121.6
1936			April.....	107.2	108.4
January.....	108.7	104.1	May.....	102.9	106.2
February.....	108.7	104.1	June.....	95.7	96.4
March.....	108.7	104.1	July.....	95.7	96.4
April.....	107.2	104.1	August.....	91.3	96.4
May.....	104.3	104.1	September.....	95.7	96.4
June.....	104.3	104.1	October.....	97.1	96.4
July.....	113.0	109.5	November.....	94.2	96.4
August.....	115.9	109.5	December.....	98.6	96.4
September.....	113.0	109.5			
October.....	107.2	109.5	1939		
November.....	105.8	109.5	January.....	95.7	96.4
December.....	111.6	109.5	February.....	95.7	96.4
1937			March.....	98.6	98.6
January.....	113.0	109.5	April.....	98.6	98.6
February.....	111.6	109.5	May.....	98.6	98.6
March.....	113.0	109.5	June.....	102.9	98.6
April.....	124.6	112.8	July.....	98.6	98.6
May.....	124.6	112.8	August.....	94.2	98.6
			September.....	108.7	103.0

Specification: Oil, linseed, raw.

Wholesale: Per pound, in barrels, carlots, producer to retail dealer, f. o. b. cars' destination.

Retail: Per gallon; dealer to contractor, delivered to job site, city.

TABLE 118.—*Linseed oil*

REGION IV. WEST NORTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	98.6	110.9	June.....	120.2	115.7
February.....	100.0	110.9	July.....	121.6	117.3
March.....	104.3	110.9	August.....	121.6	115.7
April.....	104.3	110.9	September.....	117.3	115.7
May.....	107.2	110.9	October.....	120.2	115.7
June.....	105.8	110.9	November.....	117.3	114.9
July.....	101.4	110.9	December.....	111.5	112.5
August.....	95.7	110.9	1938		
September.....	92.8	110.9	January.....	113.0	112.5
October.....	104.2	110.9	February.....	111.5	111.7
November.....	104.2	110.9	March.....	108.6	110.1
December.....	111.5	110.9	April.....	107.2	110.1
1936			May.....	102.9	106.9
January.....	103.6	110.9	June.....	95.7	100.4
February.....	108.6	110.9	July.....	95.7	100.4
March.....	108.6	110.9	August.....	91.4	98.0
April.....	107.2	110.9	September.....	95.7	98.8
May.....	104.3	110.9	October.....	97.1	98.8
June.....	104.3	110.9	November.....	94.2	98.8
July.....	113.0	110.1	December.....	98.6	101.2
August.....	115.9	111.7	1939		
September.....	113.0	110.9	January.....	95.7	98.4
October.....	107.2	107.7	February.....	95.7	98.4
November.....	105.8	106.1	March.....	98.6	100.0
December.....	111.5	108.5	April.....	98.6	100.8
1937			May.....	98.6	100.0
January.....	113.0	109.3	June.....	102.9	100.8
February.....	111.5	107.7	July.....	98.6	100.0
March.....	113.0	112.5	August.....	94.2	96.8
April.....	124.5	119.0	September.....	108.6	103.2
May.....	124.5	119.0			

Specification: Oil, linseed, raw.

Wholesale: Per pound, in barrels, carlots, producer to retail dealer, f. o. b. cars' destination.

Retail: Per gallon; dealer to contractor, delivered to job site, city.

TABLE 119.—*Linseed oil*

REGION V. SOUTH ATLANTIC

[Wholesale and retail price indexes—July–September 1939 = 100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	98.7	91.5	June.....	120.3	95.4
February.....	100.4	91.5	July.....	122.0	95.4
March.....	104.7	91.5	August.....	122.0	95.4
April.....	104.7	91.5	September.....	117.7	95.4
May.....	107.3	91.5	October.....	120.3	95.4
June.....	105.9	91.5	November.....	117.7	95.4
July.....	101.5	91.5	December.....	112.1	95.4
August.....	96.1	91.5			
September.....	92.9	91.5	1938		
October.....	102.5	91.5	January.....	113.4	95.4
November.....	102.5	91.5	February.....	111.6	95.4
December.....	111.6	91.5	March.....	109.0	95.4
1936			April.....	107.3	95.4
January.....	109.0	94.9	May.....	103.0	95.4
February.....	109.0	94.9	June.....	96.1	95.4
March.....	109.0	94.9	July.....	96.1	95.4
April.....	107.3	94.9	August.....	91.7	95.4
May.....	104.7	94.9	September.....	96.1	95.4
June.....	104.7	94.9	October.....	97.2	95.4
July.....	113.4	94.9	November.....	94.8	95.4
August.....	116.0	94.9	December.....	98.7	95.4
September.....	113.4	94.9			
October.....	107.8	94.9	1939		
November.....	105.9	94.9	January.....	96.1	95.9
December.....	111.6	94.9	February.....	96.1	95.9
1937			March.....	99.1	95.9
January.....	113.4	95.4	April.....	99.1	95.9
February.....	111.6	95.4	May.....	99.1	95.9
March.....	113.4	95.4	June.....	103.0	95.9
April.....	124.6	95.4	July.....	98.7	95.9
May.....	124.6	95.4	August.....	94.8	101.1
			September.....	107.7	102.9

Specification: Oil, linseed, raw.

Wholesale: Per pound, in barrels, carlots, producer to retail dealer, f. o. b. cars' destination

Retail: Per gallon; dealer to contractor, delivered to job site, city.

TABLE 120.—*Linseed oil*

REGION VI. EAST SOUTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	97.7	-----	June.....	118.8	-----
February.....	99.1	-----	July.....	120.3	-----
March.....	103.3	-----	August.....	120.3	-----
April.....	103.3	-----	September.....	116.0	-----
May.....	106.1	-----	October.....	118.8	-----
June.....	104.7	-----	November.....	116.0	-----
July.....	100.5	-----	December.....	111.3	-----
August.....	94.9	-----	1938		
September.....	92.0	-----	January.....	111.8	100.0
October.....	98.4	-----	February.....	110.4	130.0
November.....	98.4	-----	March.....	107.6	100.0
December.....	110.4	-----	April.....	106.1	100.0
1936			May.....	101.9	100.0
January.....	107.6	-----	June.....	94.9	100.0
February.....	107.6	-----	July.....	94.9	100.0
March.....	107.6	-----	August.....	90.6	100.0
April.....	106.1	-----	September.....	94.9	100.0
May.....	103.3	-----	October.....	96.3	100.0
June.....	103.3	-----	November.....	94.4	100.0
July.....	111.8	-----	December.....	97.7	100.0
August.....	114.6	-----	1939		
September.....	111.8	-----	January.....	94.9	100.0
October.....	107.1	-----	February.....	94.9	100.0
November.....	104.7	-----	March.....	98.6	100.0
December.....	110.4	-----	April.....	98.6	100.0
1937			May.....	98.6	100.0
January.....	111.8	-----	June.....	101.9	100.0
February.....	110.4	-----	July.....	97.7	100.0
March.....	111.8	-----	August.....	94.4	100.0
April.....	123.1	-----	September.....	107.6	100.0
May.....	123.1	-----			

Specification: Oil, linseed, raw.

Wholesale: Per pound, in barrels, carlots, producer to retail dealer, f. o. b. cars' destination.

Retail: Per gallon; dealer to contractor, delivered to job site, city.

TABLE 121.—*Linseed oil*

REGION VII. WEST SOUTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	97.6		June.....	118.6	100.0
February.....	100.0		July.....	121.0	100.0
March.....	104.2		August.....	121.0	100.0
April.....	104.2		September.....	116.8	100.0
May.....	106.0		October.....	118.6	100.0
June.....	104.6		November.....	116.8	100.0
July.....	100.4		December.....	111.2	100.0
August.....	95.8				
September.....	92.0		1938		
October.....	94.4		January.....	112.6	100.0
November.....	94.4		February.....	110.2	100.0
December.....	110.2		March.....	108.4	100.0
1936			April.....	106.0	100.0
January.....	108.4		May.....	101.8	100.0
February.....	108.4		June.....	95.8	100.0
March.....	108.4		July.....	95.8	100.0
April.....	106.0		August.....	91.6	100.0
May.....	104.2		September.....	95.8	100.0
June.....	104.2		October.....	96.2	100.0
July.....	112.6		November.....	94.4	100.0
August.....	114.4		December.....	97.6	100.0
September.....	112.6				
October.....	107.0		1939		
November.....	104.6		January.....	95.8	100.0
December.....	110.2		February.....	95.8	100.0
1937			March.....	98.6	100.0
January.....	112.6	100.0	April.....	98.6	100.0
February.....	110.2	100.0	May.....	98.6	100.0
March.....	112.6	100.0	June.....	101.8	100.0
April.....	122.8	100.0	July.....	97.6	100.0
May.....	122.8	100.0	August.....	94.4	100.0
			September.....	108.4	100.0

Specification: Oil, linseed, raw.

Wholesale: Per pound, in barrels, carlots, producer to retail dealer, f. o. b. cars' destination.

Retail: Per gallon; dealer to contractor, delivered to job site, city.

TABLE 122.—*Linseed oil*

REGION VIII. ROCKY MOUNTAIN

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	98.0	103.1	June.....	118.6	114.8
February.....	100.0	104.4	July.....	120.6	113.6
March.....	104.1	107.5	August.....	120.6	115.4
April.....	104.1	107.5	September.....	116.5	115.4
May.....	106.2	107.5	October.....	118.6	117.2
June.....	104.9	108.1	November.....	116.5	112.8
July.....	100.8	109.4	December.....	111.0	111.1
August.....	95.9	105.9			
September.....	92.5	105.8	1938		
October.....	98.8	111.6	January.....	112.3	111.6
November.....	98.8	111.6	February.....	110.4	111.0
December.....	110.4	115.9	March.....	108.2	109.9
1936			April.....	106.2	106.3
January.....	108.2	115.9	May.....	102.1	104.2
February.....	108.2	115.9	June.....	95.9	99.2
March.....	108.2	115.9	July.....	95.9	99.2
April.....	106.2	114.6	August.....	91.8	97.3
May.....	104.1	108.5	September.....	95.9	99.2
June.....	104.1	110.6	October.....	96.6	100.8
July.....	112.3	113.3	November.....	94.5	97.6
August.....	114.5	120.2	December.....	98.0	100.2
September.....	112.3	118.3			
October.....	106.9	111.5	1939		
November.....	104.9	112.7	January.....	95.9	101.2
December.....	110.4	111.6	February.....	95.9	101.2
1937			March.....	98.6	101.2
January.....	112.3	108.8	April.....	98.6	101.2
February.....	110.4	108.0	May.....	98.6	101.2
March.....	112.3	108.6	June.....	102.1	99.3
April.....	122.7	116.0	July.....	98.0	98.6
May.....	122.7	114.8	August.....	94.5	95.3
			September.....	108.2	101.1

Specification: Oil, linseed, raw.

Wholesale: Per pound, in barrels, carlots, producer to retail dealer, f. o. b. cars destination.

Retail: Per gallon; dealer to contractor, delivered to job site, city.

TABLE 123.—*Linseed oil*

REGION IX. PACIFIC

[Wholesale and retail price indexes—July-September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	97.3	105.5	June.....	117.6	113.1
February.....	100.0	106.2	July.....	120.3	113.1
March.....	104.1	110.2	August.....	120.3	120.1
April.....	104.1	110.5	September.....	116.2	120.1
May.....	105.4	110.5	October.....	117.6	115.6
June.....	104.1	110.5	November.....	116.2	115.6
July.....	100.0	110.5	December.....	110.8	114.8
August.....	95.9	104.8	1938		
September.....	91.9	110.2	January.....	112.2	114.8
October.....	104.1	110.9	February.....	109.5	114.8
November.....	104.1	110.9	March.....	108.1	110.3
December.....	109.5	115.2	April.....	105.4	105.8
1936			May.....	101.4	101.8
January.....	108.1	111.5	June.....	95.9	100.8
February.....	108.1	111.2	July.....	95.9	100.8
March.....	108.1	111.2	August.....	91.9	96.5
April.....	105.4	108.5	September.....	95.9	99.8
May.....	104.1	108.2	October.....	95.9	99.8
June.....	104.1	107.7	November.....	94.8	96.5
July.....	112.2	116.2	December.....	97.3	103.0
August.....	113.5	119.1	1939		
September.....	112.2	114.8	January.....	95.9	103.0
October.....	106.8	110.9	February.....	95.9	103.0
November.....	104.1	110.9	March.....	98.6	103.0
December.....	109.5	114.5	April.....	98.6	103.0
1937			May.....	98.6	99.5
January.....	112.2	114.8	June.....	101.4	98.7
February.....	109.5	110.9	July.....	97.3	96.0
March.....	112.2	111.8	August.....	94.6	95.5
April.....	121.6	112.1	September.....	108.1	108.3
May.....	121.6	113.1			

Specification: Oil, linseed, raw.

Wholesale: Per pound, in barrels, carlots, producer to retail dealer, f. o. b. cars destination.

Retail: Per gallon; dealer to contractor, delivered to job site, city.

CHAPTER XI

TURPENTINE

DESCRIPTION OF THE INDUSTRY

Strictly speaking, turpentine is a term applying only to the gum obtained from pine trees which is distilled to yield gum, spirits of turpentine, and rosin. However, the term is more commonly used for "spirits of turpentine," the volatile portion of the distillate, which is widely used by manufacturers and painters as a paint and varnish thinner.¹ Turpentine is a product of destructive distillation of long leaf yellow pine stumps, and is also a product of the process of steam solvent distillation of logged pine wood. Under the first process, according to one member of the industry, one cord of stumps averages 800 pounds of charcoal, 65 gallons of pine tar, 15 gallons of turpentine and 20 gallons of miscellaneous distillates. Under the steam solvent process, the products are wood rosin, pine oil, wood turpentine, and dipentene turpentine which is referred to as the top turpentine.

In 1937, 993 turpentine and rosin manufacturing establishments had a total production valued at \$29,000,000. Between 1929 and 1937, the number of establishments varied between 843 and 1,183, and the value of the product between \$16,000,000 and \$36,000,000.²

Production of turpentine and rosin is centered in three Southern States which in 1937 contributed 93 percent of the total value of product: Georgia, 57 percent; Florida, 26 percent; and Alabama, 10 percent. Five other States in the same area produced the remainder.

PRICE STRUCTURE

Channels of Distribution.

In 1935, 15 percent of turpentine and rosin sold was shipped directly from producers to industrial users, while 83 percent went to wholesalers and jobbers.³ Wholesalers and jobbers sell directly to large painting contractors and to retail paint dealers and hardware stores, who in turn sell to painters and over-the-counter trade.

Delivered Prices.

Prices to the trade are quoted delivered, with freight allowed on the invoice. The delivered price, however, is the sum of the f. o. b. plant price, plus freight. Since all producers are located in the same section of the country, freight charges do not vary appreciably among companies. Retail prices are quoted delivered job site.

¹ Ray C. Martin, *Glossary of Paint, Varnish, Lacquer and Applied Terms*, American Paint Journal Co., St. Louis, 1937.

² Census of Manufactures, 1937, "Turpentine and Rosin," p. 540 ff.

³ Census of Business, 1935, "Turpentine and Rosin," p. 95.

PRICE LEVELS AND TRENDS

Geographical Variations.

As of September 15, 1939, wholesale prices in the 48 cities for which both wholesale and retail data were available ranged from 26 to 40 cents per gallon; in 34 of the cities, the range was from 31 to 35 cents per gallon. Average regional wholesale prices varied between 30 and 36 cents.

The spread between retail prices was much more marked, varying from 40 to 90 cents per gallon. However, retail prices in 26 of the 48 cities were within a range of 51 to 65 cents per gallon. In the different regions, average retail prices varied from 47 to 68 cents, although the range was from 55 to 68 cents, if the Middle Atlantic area is excluded. The most typical retail prices were from 51 to 55 cents per gallon. They were less than 50 cents in 9 cities and more than 70 cents in 9 cities. The distribution of prices follows:

Price range per gallon	Number of cities		Price range per gallon	Number of cities	
	Whole-sale	Retail		Whole-sale	Retail
\$0.26 to \$0.30.....	8		\$0.51 to \$0.55.....		10
\$0.31 to \$0.35.....	34		\$0.56 to \$0.60.....		9
\$0.36 to \$0.40.....	6	3	\$0.61 to \$0.65.....		7
\$0.41 to \$0.45.....		3	\$0.66 to \$0.70.....		4
\$0.46 to \$0.50.....		3	\$0.71 and over.....		9

The spread between wholesale and retail prices varied from 25 to 183 percent and was from 60 to 100 percent in 26 of the 48 cities.

Retail margin (percent)	Number of cities	Retail margin (percent)	Number of cities
21 to 30.....	2	81 to 90.....	8
31 to 40.....	2	91 to 100.....	4
41 to 50.....	4	101 to 110.....	4
51 to 60.....	1	111 and above.....	7
61 to 70.....	6		
71 to 80.....	8	Total.....	48

The average spread for the several regions varied from 52 percent in the Middle Atlantic area to 128 percent in the East South Central. It is interesting to note that the regions showing the greatest differences—South Atlantic, East South Central and West South Central—also reveal the greatest degree of rigidity in retail prices.

Region	Average price		Margin (percent)
	Whole-sale	Retail	
I. New England.....	\$0.32	\$0.56	75
II. Middle Atlantic.....	.31	.47	52
III. East North Central.....	.32	.55	72
IV. West North Central.....	.33	.58	76
V. South Atlantic.....	.30	.61	103
VI. East South Central.....	.30	.68	128
VII. West South Central.....	.32	.68	113
VIII. Rocky Mountain.....	.36	.64	78
IX. Pacific.....	.34	.65	91

Price Trends. (See chart XV and tables 124 to 133.)

The wholesale price of turpentine was subject to very sharp and frequent fluctuations between 1935 and September 1939. The predominant trend was downward, resulting in a net decline of 45 percent for the period. Retail prices were much more stable and declined by only 13 percent.

In the first 6 months of 1935, the average wholesale price for all 50 cities fell 19 percent, the index dropping from 186 in January to 150 in July (based on the July-September 1939 average=100). Following a short-lived 7 percent recovery, the decline was resumed until prices leveled off in the middle of 1936 with the index at 135. In the last 6 months of 1936, the index rose to 160, only to decline sharply and steadily to 90 in August 1938. Between the latter date and February 1939, there was an advance of 22 percent, followed by a decline which was interrupted only by the outbreak of war in September.

Since production is concentrated in a very limited area, and delivered prices are computed on a simple f. o. b. plant basis, the wholesale price trend for the Nation as a whole was the same as in the various regions. On the other hand retail price trends were far more variable geographically. In the East North Central, New England, Rocky Mountain, and Pacific regions the retail prices fluctuated much more widely than the retail composite for the Nation and closely followed the trend of wholesale prices. Retail prices in the remaining five regions were much more stable.

CHART XV

TURPENTINE

WHOLESALE AND RETAIL PRICE INDEXES

JULY - SEPTEMBER 1939 = 100

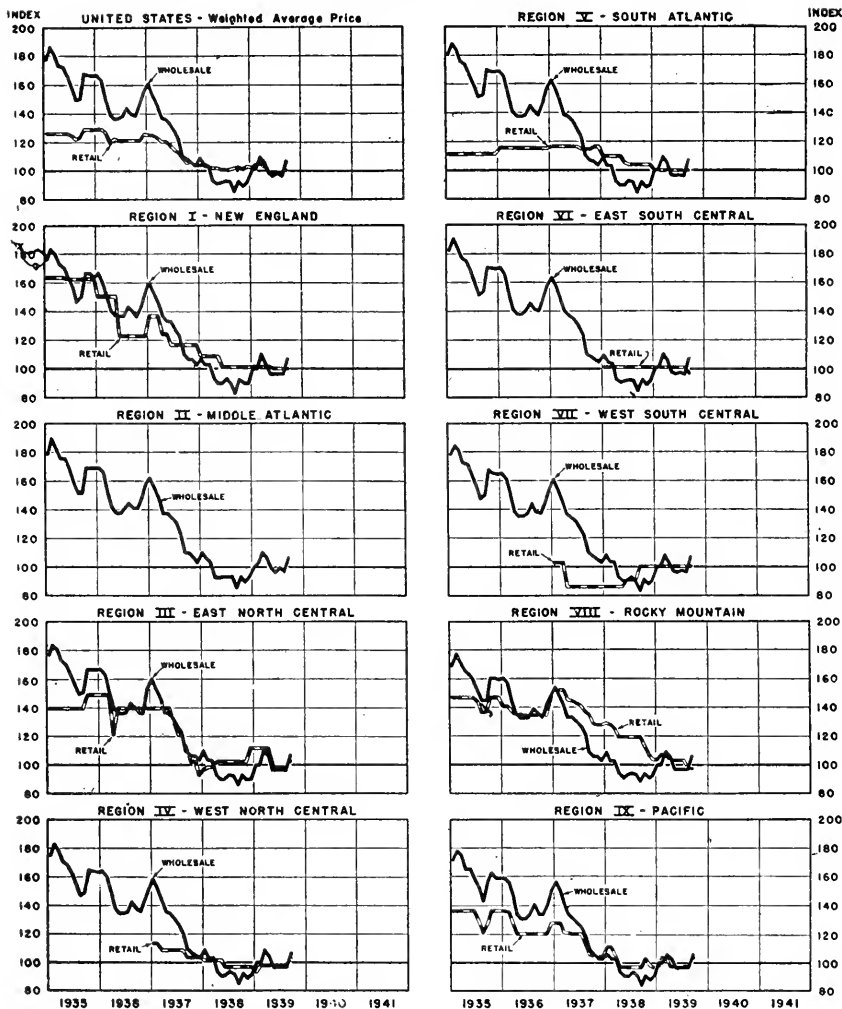


TABLE 124.—*Turpentine*

COMPOSITE UNITED STATES AVERAGE

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	177.8	126.4	June.....	133.1	118.0
February.....	186.2	126.4	July.....	128.8	115.4
March.....	181.0	126.4	August.....	123.0	113.1
April.....	173.7	126.4	September.....	110.1	108.8
May.....	172.4	126.4	October.....	108.3	105.7
June.....	166.0	126.4	November.....	106.1	106.1
July.....	157.4	124.6	December.....	103.5	103.6
August.....	149.8	122.4	1938		
September.....	150.7	123.8	January.....	109.3	104.2
October.....	167.5	129.0	February.....	104.9	104.7
November.....	166.9	129.0	March.....	103.4	103.0
December.....	166.6	129.0	April.....	93.2	102.1
1936			May.....	91.4	102.1
January.....	166.9	129.2	June.....	91.7	101.1
February.....	163.3	129.1	July.....	93.2	100.7
March.....	150.6	127.2	August.....	92.4	100.7
April.....	139.9	117.4	September.....	85.6	101.7
May.....	136.5	122.7	October.....	92.6	102.8
June.....	136.5	121.6	November.....	89.2	101.4
July.....	138.7	121.6	December.....	91.7	103.4
August.....	143.9	121.6	1939		
September.....	139.9	121.6	January.....	100.0	102.3
October.....	138.7	121.6	February.....	101.6	104.5
November.....	146.4	121.6	March.....	109.5	104.5
December.....	153.6	123.8	April.....	105.9	102.8
1937			May.....	98.2	99.2
January.....	160.8	126.3	June.....	96.6	99.1
February.....	154.1	126.3	July.....	98.2	99.2
March.....	146.6	124.8	August.....	96.6	98.9
April.....	137.2	120.9	September.....	106.8	100.8
May.....	136.3	120.8			

Specification: Turpentine, gum spirits; per gallon.

Wholesale: In barrels, carlots; producer to retail dealer, f. o. b. cars, destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 125.—*Turpentine*

REGION I. NEW ENGLAND

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	176.7	163.5	June.....	133.3	116.9
February.....	183.3	163.5	July.....	128.7	116.9
March.....	180.0	163.5	August.....	123.3	116.9
April.....	173.3	163.5	September.....	110.0	116.9
May.....	170.0	163.5	October.....	106.7	116.9
June.....	163.3	162.5	November.....	106.7	116.9
July.....	158.7	162.5	December.....	103.3	116.9
August.....	146.7	162.5	1938		
September.....	150.0	162.5	January.....	108.9	108.7
October.....	168.7	162.5	February.....	103.3	108.7
November.....	168.7	162.5	March.....	103.3	108.7
December.....	163.3	162.5	April.....	93.3	108.7
1936			May.....	90.0	108.7
January.....	166.7	150.0	June.....	90.0	101.2
February.....	160.0	150.0	July.....	93.3	101.2
March.....	150.0	150.0	August.....	90.0	101.2
April.....	140.0	150.0	September.....	83.3	101.2
May.....	136.7	150.0	October.....	93.3	101.2
June.....	136.7	122.6	November.....	90.0	101.2
July.....	136.7	122.6	December.....	90.0	101.2
August.....	143.3	122.6	1939		
September.....	140.0	122.6	January.....	100.3	101.6
October.....	136.7	122.6	February.....	103.7	101.6
November.....	143.3	122.6	March.....	113.1	101.6
December.....	153.3	122.6	April.....	100.3	101.6
1937			May.....	97.7	101.6
January.....	160.0	136.9	June.....	97.7	100.0
February.....	153.3	136.9	July.....	97.7	100.0
March.....	146.7	136.9	August.....	96.9	100.0
April.....	136.7	124.2	September.....	105.4	100.0
May.....	133.5	124.2			

Specification: Turpentine, gum spirits; per gallon.

Wholesale: In barrels, carlots; producer to retail dealer, f. o. b. cars, destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 126.—*Turpentine*

REGION II, MIDDLE ATLANTIC

[Wholesale price index—July–September 1939=100.0.]

Year and month	Wholesale index	Year and month	Wholesale index	Year and month	Wholesale index
1935		1936—Continued		1938—Continued	
January.....	179.3	September.....	141.4	March.....	103.4
February.....	189.7	October.....	141.1	April.....	93.1
March.....	182.8	November.....	148.3	May.....	92.9
April.....	175.9	December.....	158.4	June.....	93.1
May.....	175.6			July.....	93.1
June.....	169.0	1937		August.....	93.1
July.....	158.6	January.....	162.1	September.....	86.2
August.....	151.7	February.....	155.2	October.....	93.1
September.....	151.7	March.....	148.3	November.....	89.7
October.....	169.0	April.....	137.9	December.....	93.1
November.....	169.0	May.....	137.9		
December.....	169.0	June.....	134.5	1939	
		July.....	131.0	January.....	100.0
1936		August.....	124.1	February.....	103.2
January.....	169.0	September.....	110.3	March.....	110.3
February.....	165.5	October.....	110.1	April.....	106.9
March.....	151.7	November.....	106.9	May.....	99.7
April.....	141.4	December.....	103.4	June.....	96.6
May.....	137.9			July.....	99.7
June.....	137.9	1938		August.....	96.6
July.....	141.1	January.....	110.3	September.....	106.9
August.....	144.8	February.....	106.6		

Specification: Turpentine, gum spirits; per gallon.

Wholesale: In barrels, carlots, producer to retail dealer, f. o. b. cars destination.

TABLE 127.—*Turpentine*

REGION III. EAST NORTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	176.7	139.7	June.....	133.1	130.4
February.....	183.8	139.7	July.....	127.1	121.1
March.....	180.0	139.7	August.....	123.1	121.1
April.....	173.3	139.7	September.....	110.0	111.8
May.....	170.2	139.7	October.....	106.8	102.5
June.....	163.8	139.7	November.....	106.5	102.5
July.....	156.7	139.7	December.....	103.3	93.2
August.....	149.8	139.7	1938		
September.....	150.0	139.7	January.....	109.8	96.9
October.....	166.7	149.0	February.....	103.5	98.7
November.....	166.5	149.0	March.....	103.3	98.7
December.....	166.5	149.0	April.....	93.3	102.5
1936			May.....	90.2	102.5
January.....	166.7	149.0	June.....	90.4	102.5
February.....	163.1	149.0	July.....	93.3	102.5
March.....	150.0	149.0	August.....	93.1	102.5
April.....	139.8	121.1	September.....	86.5	102.5
May.....	136.7	139.7	October.....	93.3	102.5
June.....	136.7	139.7	November.....	90.0	102.5
July.....	136.8	139.7	December.....	90.4	111.8
August.....	143.3	139.7	1939		
September.....	140.0	139.7	January.....	100.0	111.8
October.....	136.8	139.7	February.....	100.2	111.8
November.....	136.5	139.7	March.....	109.8	111.8
December.....	153.5	139.7	April.....	106.5	111.8
1937			May.....	96.8	98.7
January.....	160.0	139.7	June.....	96.7	98.7
February.....	153.3	139.7	July.....	96.8	98.7
March.....	146.7	139.7	August.....	96.7	98.7
April.....	136.7	139.7	September.....	106.7	102.5
May.....	136.5	139.7			

Specification: Turpentine, gum spirits; per gallon.

Wholesale: In barrels, carlots; producer to retail dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 128.—*Turpentine*

REGION IV. WEST NORTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	175.1	112.4	June.....	131.6	108.6
February.....	182.9	112.4	July.....	126.7	108.6
March.....	178.4	112.4	August.....	121.8	108.6
April.....	170.8	112.4	September.....	109.8	103.7
May.....	168.6	112.4	October.....	106.5	103.7
June.....	163.3	112.4	November.....	105.4	103.7
July.....	155.5	112.4	December.....	103.3	103.7
August.....	147.1	112.4	1938		
September.....	149.0	112.4	January.....	108.7	101.8
October.....	165.3	112.4	February.....	103.2	101.8
November.....	164.2	112.4	March.....	103.2	101.8
December.....	163.4	112.4	April.....	93.5	101.8
1936			May.....	90.2	101.8
January.....	164.2	112.4	June.....	91.4	96.8
February.....	160.1	112.4	July.....	93.5	96.8
March.....	149.0	112.4	August.....	91.5	96.8
April.....	138.1	112.4	September.....	85.0	96.8
May.....	134.8	112.4	October.....	92.4	96.8
June.....	134.8	112.4	November.....	89.1	96.8
July.....	135.9	112.4	December.....	91.4	96.8
August.....	142.5	112.4	1939		
September.....	138.1	112.4	January.....	100.0	93.0
October.....	135.9	112.4	February.....	100.0	98.0
November.....	143.8	112.4	March.....	108.7	98.0
December.....	152.3	112.4	April.....	104.6	98.0
1937			May.....	96.7	98.0
January.....	158.8	113.6	June.....	96.7	98.0
February.....	152.3	113.6	July.....	96.7	98.0
March.....	144.6	108.6	August.....	96.7	98.0
April.....	135.9	108.6	September.....	106.5	103.0
May.....	134.8	108.6			

Specification: Turpentine, gum spirits; per gallon.

Wholesale: In barrels, carlots; producer to retail dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 129.—*Turpentine*

REGION V. SOUTH ATLANTIC

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	180.8	111.6	June.....	134.2	116.8
February.....	187.9	111.6	July.....	128.4	116.8
March.....	184.0	111.6	August.....	123.7	115.1
April.....	176.1	111.6	September.....	110.5	115.1
May.....	173.9	111.6	October.....	107.4	115.1
June.....	165.9	111.6	November.....	106.2	116.8
July.....	159.5	111.6	December.....	103.9	116.8
August.....	151.4	111.6	1938		
September.....	152.9	111.6	January.....	109.4	110.0
October.....	170.0	111.6	February.....	103.9	110.0
November.....	169.1	111.6	March.....	103.5	110.0
December.....	168.9	111.6	April.....	93.0	110.0
1936			May.....	89.9	110.0
January.....	169.1	115.8	June.....	89.9	105.8
February.....	165.4	115.8	July.....	93.0	104.2
March.....	152.5	115.8	August.....	91.9	104.2
April.....	141.2	115.8	September.....	84.9	104.2
May.....	137.7	115.8	October.....	92.2	104.2
June.....	137.7	115.8	November.....	88.7	104.2
July.....	138.9	115.8	December.....	89.9	104.2
August.....	145.5	115.8	1939		
September.....	141.2	115.8	January.....	100.0	100.0
October.....	138.9	115.8	February.....	100.6	100.0
November.....	147.9	115.8	March.....	109.7	100.0
December.....	156.4	115.8	April.....	105.9	100.0
1937			May.....	96.9	100.0
January.....	163.0	116.8	June.....	96.5	100.0
February.....	156.4	116.8	July.....	96.9	100.0
March.....	145.2	116.8	August.....	96.5	100.0
April.....	138.9	116.8	September.....	107.0	100.0
May.....	137.4	116.8			

Specification: Turpentine, gum spirits; per gallon.

Wholesale: In barrels, carlots; producer to retail dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 130.—*Turpentine*

REGION VI. EAST SOUTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January	182.5		June	134.8	
February	190.7		July	130.8	
March	184.7		August	124.2	
April	177.2		September	110.6	
May	175.4		October	108.4	
June	169.6		November	106.6	
July	160.0		December	104.8	
August	151.9		1938		
September	154.2		January	109.6	101.4
October	170.6		February	104.8	101.4
November	170.1		March	103.5	101.4
December	169.6		April	92.9	101.4
1936			May	90.7	101.4
January	170.1		June	91.9	101.4
February	166.0		July	92.9	101.4
March	152.9		August	91.9	101.4
April	141.9		September	84.9	101.4
May	138.4		October	92.5	101.4
June	138.4		November	89.0	101.4
July	140.1		December	91.9	101.4
August	145.9		1939		
September	141.9		January	100.0	101.4
October	140.1		February	101.3	101.4
November	148.4		March	110.1	101.4
December	157.8		April	106.1	101.4
1937			May	97.8	101.4
January	163.5		June	96.5	101.4
February	157.8		July	97.8	101.4
March	148.9		August	96.5	101.4
April	140.1		September	107.1	97.2
May	137.8				

Specification: Turpentine, gum spirits; per gallon.

Wholesale: In barrels, carlots; producer to retail dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 131.—*Turpentine*

REGION VII. WEST SOUTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	178.5		June.....	132.2	86.3
February.....	184.9		July.....	127.6	86.3
March.....	181.5		August.....	122.0	86.3
April.....	173.0		September.....	110.2	86.3
May.....	171.8		October.....	107.2	86.3
June.....	165.0		November.....	105.0	86.3
July.....	157.7		December.....	103.4	86.3
August.....	148.0				
September.....	150.9		1938		
October.....	167.9		January.....	108.0	86.3
November.....	166.2		February.....	103.8	86.3
December.....	165.0		March.....	103.4	86.3
1936			April.....	93.2	86.3
January.....	166.2		May.....	90.3	86.3
February.....	161.6		June.....	90.3	90.8
March.....	150.9		July.....	93.2	90.8
April.....	139.0		August.....	90.3	90.8
May.....	135.6		September.....	83.5	100.0
June.....	135.6		October.....	91.5	100.0
July.....	137.8		November.....	88.1	100.0
August.....	144.2		December.....	90.3	100.0
September.....	139.0				
October.....	137.8		1939		
November.....	144.6		January.....	100.0	100.0
December.....	154.8		February.....	100.5	100.0
1937			March.....	108.4	100.0
January.....	161.1	103.1	April.....	103.8	100.0
February.....	154.3	103.1	May.....	97.1	100.0
March.....	145.8	103.1	June.....	96.6	100.0
April.....	137.4	86.3	July.....	97.1	100.0
May.....	135.2	86.3	August.....	96.6	100.0
			September.....	106.8	100.0

Specification: Turpentine, gum spirits; per gallon.

Wholesale: In barrels, carlots, producer to retail dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 132.—*Turpentine*

REGION VIII. ROCKY MOUNTAIN

[Wholesale and retail price indexes—July–September 1939 = 100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	169.1	147.0	June.....	130.0	143.0
February.....	177.8	147.0	July.....	126.7	141.4
March.....	172.1	147.0	August.....	121.0	137.1
April.....	166.1	147.0	September.....	109.0	135.1
May.....	163.1	147.0	October.....	106.0	128.5
June.....	159.8	147.0	November.....	106.0	128.0
July.....	151.0	144.2	December.....	103.0	128.0
August.....	144.7	136.7	1938		
September.....	145.0	137.0	January.....	109.0	129.1
October.....	160.1	147.0	February.....	103.0	127.9
November.....	160.1	147.0	March.....	103.0	124.0
December.....	159.8	147.0	April.....	94.0	119.5
1936			May.....	91.0	119.5
January.....	160.1	141.2	June.....	93.7	119.5
February.....	156.8	141.2	July.....	94.0	119.5
March.....	145.0	137.9	August.....	93.7	119.5
April.....	136.0	135.6	September.....	88.7	119.5
May.....	133.0	135.6	October.....	94.0	112.9
June.....	133.0	134.6	November.....	91.0	106.7
July.....	133.0	134.6	December.....	93.7	103.9
August.....	139.0	134.6	1939		
September.....	136.0	134.6	January.....	100.0	103.9
October.....	133.0	134.6	February.....	100.0	107.3
November.....	141.7	134.6	March.....	109.0	106.9
December.....	148.0	145.6	April.....	105.7	103.9
1937			May.....	97.0	103.9
January.....	154.0	152.3	June.....	97.0	103.9
February.....	148.0	152.3	July.....	97.0	103.9
March.....	142.0	152.3	August.....	97.0	97.3
April.....	133.0	145.2	September.....	106.0	97.9
May.....	133.0	144.9			

Specification: Turpentine, gum spirits; per gallon.

Wholesale: In barrels, carlots; producer to retail dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 133.—*Turpentine*

REGION IX. PACIFIC

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	171.9	136.8	June.....	128.1	120.8
February.....	178.1	136.8	July.....	125.0	120.8
March.....	175.0	136.8	August.....	118.8	112.8
April.....	165.6	136.8	September.....	109.4	106.0
May.....	165.6	136.8	October.....	106.3	104.7
June.....	159.4	136.8	November.....	103.1	104.7
July.....	153.1	129.4	December.....	103.1	104.7
August.....	143.8	121.3	1938		
September.....	146.9	127.5	January.....	106.3	111.5
October.....	162.5	136.8	February.....	103.1	111.5
November.....	159.4	136.8	March.....	103.1	104.7
December.....	159.4	136.8	April.....	93.8	96.7
1936			May.....	90.6	96.7
January.....	159.4	136.8	June.....	90.6	96.7
February.....	156.3	136.2	July.....	93.8	96.7
March.....	146.9	128.8	August.....	90.6	96.7
April.....	134.4	120.8	September.....	84.4	96.7
May.....	131.3	120.8	October.....	90.6	103.5
June.....	131.3	120.8	November.....	87.5	98.0
July.....	134.4	120.8	December.....	90.6	96.7
August.....	140.6	120.8	1939		
September.....	134.4	120.8	January.....	100.0	96.7
October.....	134.4	120.8	February.....	100.0	104.7
November.....	140.6	120.8	March.....	106.3	104.7
December.....	150.0	128.2	April.....	103.1	97.4
1937			May.....	96.9	96.7
January.....	156.3	128.2	June.....	96.9	96.7
February.....	150.0	128.2	July.....	96.9	97.3
March.....	140.6	121.5	August.....	96.9	97.3
April.....	134.4	121.3	September.....	106.3	104.0
May.....	131.3	120.8			

Specification: Turpentine, gum spirits; per gallon.

Wholesale: In barrels, carlots; producer to retail dealer, f. o. b. cars destinations.

Retail: Dealer to contractor, delivered to job site, city.

CHAPTER XII

DOUGLAS FIR

DESCRIPTION OF THE INDUSTRY

The production of Douglas fir lumber in 1937 was over 6½ billion board feet. The following summary shows data from the 1937 Census of Manufactures¹ on the production and value of Douglas fir for the years indicated.

Year	Production		Year	Production	
	1,000 board feet	Average value		1,000 board feet	Average value
1929.....	8,688,700	\$20.05	1935.....	4,772,449	\$15.97
1931.....	4,648,455	12.05	1937.....	6,554,781	19.67
1933.....	3,969,154	13.57			

The volume of production of Douglas fir was exceeded by only one other kind of lumber, yellow pine, which was also slightly above fir in average unit value.

Douglas fir represented 25 percent of all lumber cut in the United States, and 29 percent of all softwood lumber. In 1937 the ratio of softwood to hardwood milled was 9 to 2.

Douglas fir is produced chiefly in the Pacific Northwest, with two States, Washington and Oregon, accounting for 95 percent of the total. Eight other States produce very small amounts. Table 134 and map V show the States in which Douglas fir is milled.

TABLE 134.—*Geographical distribution of production of Douglas fir 1937*

State	Production		State	Production	
	1,000 board feet	Percent of total		1,000 board feet	Percent of total
Washington.....	3,648,751	55.7	New Mexico.....	30,219	(1)
Oregon.....	2,566,160	39.1	Colorado.....	5,867	(1)
California.....	172,643	2.6	Arizona.....	3,280	(1)
Idaho.....	64,789	1.0	Utah.....	2,813	(1)
Montana.....	57,899	(1)	Wyoming.....	2,360	(1)

¹ Less than 1 percent.

Source: Census of Manufactures, 1937. Production of Lumber, by kind and by States, table 10, p. 514.

Many companies are engaged in cutting and milling Douglas fir. Data from the Department of Commerce show that the four leading firms produce only 23 percent of the national total. One firm often controls the three major elements of the industry—ownership of timber, logging, and manufacturing.

¹ Census of Manufacturers, 1937; "Lumber and Timber Products Not Elsewhere Classified," table 7, pp. 499, ff.

Douglas fir lumber is used for all purposes for which softwood is satisfactory. Dimension fir is the most important type, and represents 32 percent of the timber cut.

PRICE STRUCTURE

The fir dimension priced for this survey was No. 1 common, 2 inch by 4 inch by 16 feet, S4S. The wholesale prices collected were per thousand board feet, in mixed carlots, mill to retail yard, f. o. b. cars at destination.

Lumber price lists are usually set up on an f. o. b. mill basis, but prices paid are often quoted at destination.

Although the original prices quoted by producers are f. o. b. mill, the mill price, plus freight, is sometimes shaded at a particular destination. One producer stated that no two sales in the same day for any specified destination were likely to be made at the same price. However, individual mills may refrain from selling in territories where they deem the absorption of freight excessive.

Although an unsystematic delivered price practice is used, the railroad freight rate structure is such that a degree of uniformity is introduced. Freight rates have been adjusted to more or less equalize freight advantages among competing areas and mills, insofar as possible. For example, freight charges for Douglas fir from the Northwest to all points north of the Ohio River and east of Chicago are the same. This uniformity, of course, is a very important element in determining the geographical price structure. Water rates likewise result in a "zoning" of delivered prices. The rate is set up to apply to shipments from any Pacific coast port to any port on the eastern seaboard.

Channels of Distribution and Commissions.

Douglas fir is sold direct from the mill to retailer, through brokers, and by commission men, the latter two channels being the most popular. Usual discounts are 2 percent for cash in 10 days or 10th proximo, 5 percent to commission salesmen, and 8 percent to brokers; all discounts and commissions are a. d. f. (after deducting freight). The commission man merely makes the sale, the credit risk and collections remaining in the hands of the mill, while the broker assumes all risks, and gets an added 3 percent discount over the commission man. The company bills the retailers for purchases through commission men, but the broker pays the mill for lumber sold through his office, and in turn bills the retailers. Discounts are deducted by the broker when making remittance to the mill. Bona fide wholesalers, with warehouse facilities, who are not important in carlot sales to retailers, receive the same discount as the broker, and in turn sell to the small retailer in less than carlot quantities.²

Principal Sales Areas.

Fir is sold chiefly on the Pacific coast, in the mid-Atlantic States, and in the Great Lakes territory. The availability of pine, of course, restricts sales of fir in the South. The Pacific area consumes 32 percent of the output, mid-Atlantic 21 percent, and Great Lakes area 14 percent. Green lumber is shipped by water to all points on the west

² The structure here described is the formal set-up most generally followed. The extent of deviations from this practice was not determined. Interviews with a few manufacturers were the sources of the information.

coast, and via the Panama Canal to points on the Atlantic coast. Dry fir is shipped into the area east of the Rockies, the price of dry lumber being higher and freight costs less than for green material. The western edge of the Alleghenies is approximately the line at which sales of dry timber cease, due to the fact that all-rail freight rates east of the Alleghenies exceed the cost of water transportation plus the rail haul inland from the Atlantic coast.

Due to variations in delivered prices, Douglas fir producers could not quote delivered prices to every city included in this survey. To obtain approximate delivered prices, freight costs were added to f. o. b. mill quotations. This method of arriving at delivered prices does not always produce exact prices, but the price trend should be reasonably accurate.

PRICE LEVELS AND TRENDS

The trends of wholesale prices in the various regions are virtually identical and the national composite index is, therefore, representative of the price movements for the country as a whole. (See chart XVI and tables 135 to 144.) The Bureau's index number of Douglas fir lumber prices, based on the third quarter of 1939=100.0, was 92 in the early part of 1935. Prices increased 8 percent from April to July of that year when the index was 100. This level held with only slight fluctuations until December 1936 when prices again moved upward. This trend continued for 4 months during which the index increased 5 percent to 105 in March 1937. The price was unchanged over the next 6 months but, in October, influenced by the general recession in all durable goods prices, a decline began which lowered the index 8 percent to 96 in February 1938. During the next 18 months prices rose slightly but steadily, the increase aggregating 6 percent. At the time of the survey, in September 1939, demand was strong and prices were being increased at several producing points.

The national composite of retail Douglas fir prices was at about the same level as the wholesale in January 1935—91.6—but did not participate in the sharp upward movement in the summer and fall of 1935. From August 1936 to July 1937, however, the index rose 9 percent, from 91.5 to 99.6. From July 1937 to May 1939 retail averages declined much less sharply than wholesale (approximately 3 percent) and rose about 4 percent between May and September 1939.

More sensitive to varying local competitive conditions than wholesale prices, retail price behavior differed widely from region to region. In New England, the index approximated the national composite with a 10 percent increase in the spring of 1937, the only change of importance. In the Middle Atlantic region, retail prices advanced twice—6 percent in January 1937 and an additional 6 percent in June 1939. In the East North Central area retail prices dropped 4 percent in January 1936, rose 2.5 percent during 1937, and dropped 4 percent during 1939. Retail price averages in the West North Central were predominantly stable, the aggregate rise from the 1935 low to the 1937 high being 5 percent. In 1938 the index declined 2 percent and rose 2 percent in 1939. In the South Atlantic retail prices of fir rose 23 percent in January and February of 1937, declined 2 percent in 1938 and the first 6 months of 1939, and rose 4 percent in September 1939.

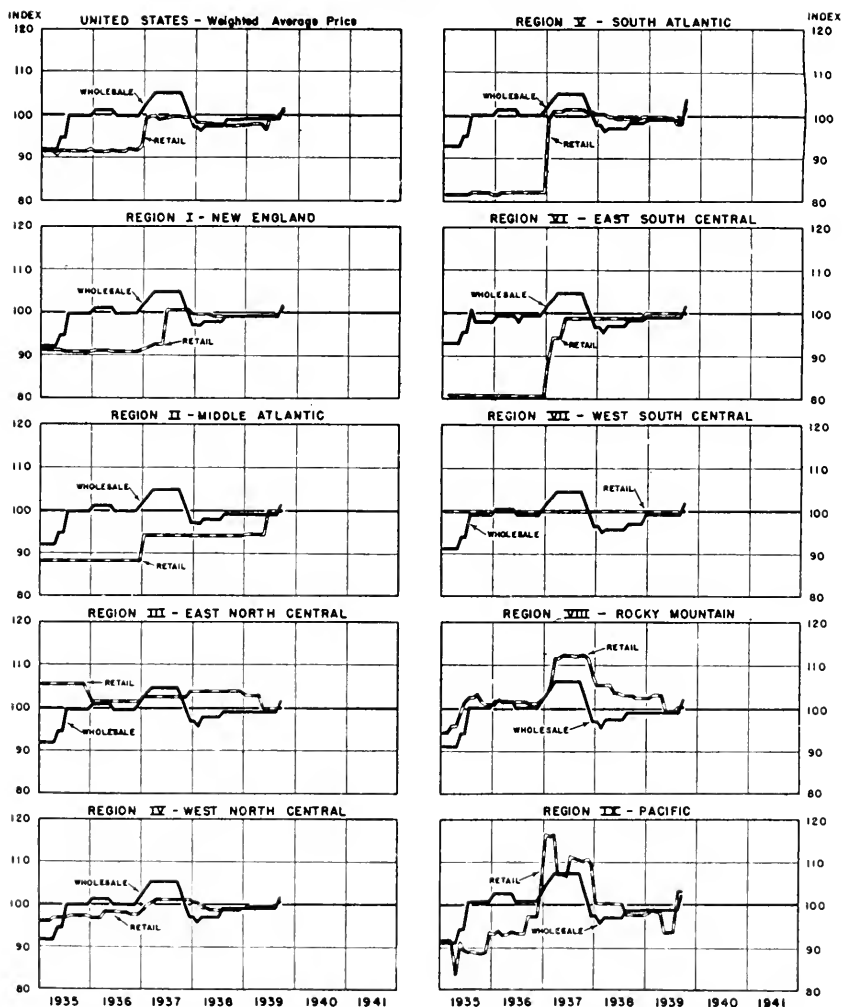
A 22 percent increase in the first 3 months of 1937 was the only change of importance in retail prices in the East South Central, and

CHART XVI

DOUGLAS FIR DIMENSION

WHOLESALE AND RETAIL PRICE INDEXES

JULY - SEPTEMBER 1939 = 100



prices were rigid throughout the entire period in the West South Central. Retail prices in the far western areas where Douglas fir is widely used closely paralleled wholesale price movements. In the Rocky Mountain region retail prices rose 9 percent in the spring and summer of 1935, tapered off about 2 percent in 1936, and rose 11 percent in the spring and summer of 1937. The downward movement of late 1937 and 1938 aggregated about 9 percent. After rising slightly early in 1939, prices eased off an additional 4 percent in May and rose 1 percent in August.

In the Pacific region retail prices dropped from an index of 91.5 in March of 1935 to 83.8 in April, but recovered to 91.1 in May. In the fall of 1936 and spring of 1937, the index rose approximately 25 percent, and dropped 17 percent in the subsequent recession lasting through October 1938. In the first 4 months of 1939, the index dropped an additional 4 percent but rose 11 percent in August.

TABLE 135.—*Douglas fir dimension, No. 1*

COMPOSITE UNITED STATES AVERAGE

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	92.0	91.6	June.....	105.2	99.1
February.....	92.0	91.6	July.....	105.2	99.6
March.....	92.0	91.6	August.....	105.2	99.6
April.....	92.0	90.8	September.....	105.2	99.6
May.....	94.6	91.7	October.....	102.6	99.4
June.....	94.6	91.6	November.....	99.9	99.5
July.....	99.9	91.6	December.....	97.3	99.4
August.....	99.9	91.6	1938		
September.....	99.9	91.6	January.....	97.3	98.2
October.....	99.9	91.5	February.....	96.4	98.2
November.....	99.9	91.6	March.....	97.5	98.1
December.....	99.9	92.0	April.....	97.5	98.1
1936			May.....	97.5	97.9
January.....	101.2	91.4	June.....	97.5	97.9
February.....	101.2	91.5	July.....	97.5	97.9
March.....	101.2	91.4	August.....	98.9	97.9
April.....	101.2	91.5	September.....	98.9	97.6
May.....	101.2	91.6	October.....	98.9	97.5
June.....	99.9	91.5	November.....	98.9	97.7
July.....	99.9	91.5	December.....	99.1	97.7
August.....	99.9	91.5	1939		
September.....	99.9	92.0	January.....	99.1	97.8
October.....	99.9	91.9	February.....	99.1	97.9
November.....	99.9	91.9	March.....	99.1	97.9
December.....	101.2	92.8	April.....	99.1	97.8
1937			May.....	99.1	96.7
January.....	102.5	99.2	June.....	99.1	99.1
February.....	103.9	99.6	July.....	99.1	99.0
March.....	105.2	99.8	August.....	99.1	100.1
April.....	105.2	98.8	September.....	101.8	100.9
May.....	105.2	99.0			

Specification: Douglas fir, dimension, No. 1 common, 2 by 4 inches by 16 feet, S4S; per M board feet.

Wholesale: In mixed carlots, mill to retail yard, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 136.—*Douglas fir dimension, No. 1*

REGION I. NEW ENGLAND

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	97.2	91.3	June.....	104.9	100.5
February.....	97.2	91.3	July.....	104.9	100.5
March.....	97.2	91.3	August.....	104.9	100.5
April.....	97.2	91.3	September.....	104.9	100.5
May.....	94.7	91.3	October.....	102.3	100.5
June.....	94.7	90.9	November.....	99.8	100.5
July.....	99.8	90.9	December.....	97.2	99.6
August.....	99.8	90.9	1938		
September.....	99.8	90.9	January.....	97.2	99.6
October.....	99.8	90.9	February.....	97.0	99.6
November.....	99.8	90.9	March.....	97.9	99.6
December.....	99.8	90.9	April.....	97.9	99.6
1936			May.....	97.9	99.2
January.....	101.1	91.1	June.....	97.9	99.2
February.....	101.1	91.1	July.....	99.2	99.2
March.....	101.1	91.1	August.....	99.2	99.2
April.....	101.1	91.1	September.....	99.2	99.2
May.....	101.1	90.9	October.....	99.2	99.2
June.....	99.8	90.9	November.....	99.2	99.2
July.....	99.8	90.9	December.....		
August.....	99.8	90.9	1939		
September.....	99.8	90.9	January.....	99.2	99.2
October.....	99.8	90.9	February.....	99.2	99.2
November.....	99.8	90.9	March.....	99.2	99.2
December.....	101.1	91.2	April.....	99.2	99.2
1937			May.....	99.2	99.2
January.....	102.3	91.6	June.....	99.2	99.2
February.....	103.6	92.0	July.....	99.2	99.2
March.....	104.9	92.6	August.....	99.2	99.6
April.....	104.9	92.6	September.....	101.7	101.2
May.....	104.9	92.6			

Specification: Douglas fir, dimension, No. 1 common, 2 by 4 inches by 16 feet, S4S; per M board feet.

Wholesale: In mixed carlots, mill to retail yard, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 137.—*Douglas fir, dimension, No. 1*

REGION II. MIDDLE ATLANTIC

[Wholesale and retail price indexes—July–September 1939 = 100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	92.2	88.4	June.....	104.9	94.1
February.....	92.2	88.4	July.....	104.9	94.1
March.....	92.2	88.4	August.....	104.9	94.1
April.....	92.2	88.4	September.....	104.9	94.1
May.....	94.7	88.4	October.....	102.3	94.1
June.....	94.7	88.4	November.....	99.8	94.1
July.....	99.8	88.4	December.....	97.2	94.1
August.....	99.8	88.4			
September.....	99.8	88.4	1938		
October.....	99.8	88.4	January.....	97.2	94.1
November.....	99.8	88.4	February.....	97.0	94.1
December.....	99.8	88.4	March.....	97.9	94.1
			April.....	97.9	94.1
1936			May.....	97.9	94.1
January.....	101.1	88.4	June.....	97.9	94.1
February.....	101.1	88.4	July.....	97.9	94.1
March.....	101.1	88.4	August.....	99.2	94.1
April.....	101.1	88.4	September.....	99.2	94.1
May.....	101.1	88.4	October.....	99.2	94.1
June.....	99.8	88.4	November.....	99.2	94.1
July.....	99.8	88.4	December.....	99.2	94.1
August.....	99.8	88.4			
September.....	99.8	88.4	1939		
October.....	99.8	88.4	January.....	99.2	94.5
November.....	99.8	88.4	February.....	99.2	94.5
December.....	101.1	88.4	March.....	99.2	94.5
			April.....	99.2	94.5
1937			May.....	99.2	94.5
January.....	102.3	94.1	June.....	99.2	100.0
February.....	103.6	94.1	July.....	99.2	100.0
March.....	104.9	94.1	August.....	99.2	100.0
April.....	104.9	94.1	September.....	101.7	100.0
May.....	104.9	94.1			

Specification: Douglas fir, dimension, No. 1 common, 2 by 4 inches by 16 feet, S4S; per M board feet.

Wholesale: In mixed carlots, mill to retail yard, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 138.—*Douglas fir, dimension, No. 1*

REGION III. EAST NORTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	91.9	105.7	June.....	104.7	102.5
February.....	91.9	105.7	July.....	104.7	102.5
March.....	91.9	105.7	August.....	104.7	102.5
April.....	91.9	105.7	September.....	104.7	102.5
May.....	94.5	105.7	October.....	102.2	102.5
June.....	94.5	105.7	November.....	99.6	102.5
July.....	99.6	105.7	December.....	97.0	103.9
August.....	99.6	105.7			
September.....	99.6	105.7	1938		
October.....	99.6	105.7	January.....	97.0	103.9
November.....	99.6	105.7	February.....	95.8	103.9
December.....	99.6	103.5	March.....	97.9	103.9
			April.....	97.9	103.9
1936			May.....	97.9	103.9
January.....	100.9	101.4	June.....	97.9	103.9
February.....	100.9	101.4	July.....	97.9	103.9
March.....	100.9	101.4	August.....	99.1	103.9
April.....	100.9	101.4	September.....	99.1	103.9
May.....	100.9	101.4	October.....	99.1	103.9
June.....	99.6	101.4	November.....	99.1	103.9
July.....	99.6	101.4	December.....	99.1	103.9
August.....	99.6	101.4			
September.....	99.6	101.4	1939		
October.....	99.6	101.4	January.....	99.1	102.9
November.....	99.6	101.4	February.....	99.1	102.9
December.....	100.9	101.4	March.....	99.1	102.9
			April.....	99.1	102.9
1937			May.....	99.1	100.0
January.....	102.2	102.5	June.....	99.1	100.0
February.....	103.5	102.5	July.....	99.1	100.0
March.....	104.7	102.5	August.....	99.1	100.0
April.....	104.7	102.5	September.....	101.7	100.0
May.....	104.7	102.5			

Specification: Douglas fir, dimension, No. 1 common, 2 by 4 inches by 16 feet, S4S; per M board feet.

Wholesale: In mixed carlots, mill to retail yard, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 139.—*Douglas fir, dimension, No. 1*

REGION IV. WEST NORTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	91.7	96.0	June.....	105.4	101.1
February.....	91.7	96.0	July.....	105.4	101.1
March.....	91.7	96.0	August.....	105.4	101.1
April.....	91.7	96.8	September.....	105.4	101.1
May.....	94.5	96.8	October.....	102.7	101.1
June.....	94.5	96.9	November.....	99.9	101.1
July.....	99.9	96.8	December.....	97.2	101.1
August.....	99.9	97.4			
September.....	99.9	97.4	1938		
October.....	99.9	97.4	January.....	97.2	100.4
November.....	99.9	97.4	February.....	95.8	100.4
December.....	99.9	97.4	March.....	97.2	99.1
			April.....	97.2	99.1
1936			May.....	97.2	98.8
January.....	101.3	96.8	June.....	97.2	98.8
February.....	101.3	96.8	July.....	97.2	98.5
March.....	101.3	96.8	August.....	99.1	98.8
April.....	101.3	98.4	September.....	99.1	98.8
May.....	101.3	98.4	October.....	99.1	98.8
June.....	99.9	98.4	November.....	99.1	98.8
July.....	99.9	98.4	December.....	99.1	98.8
August.....	99.9	98.1			
September.....	99.9	98.1	1939		
October.....	99.9	97.7	January.....	99.1	99.2
November.....	99.9	97.7	February.....	99.1	99.2
December.....	101.3	97.7	March.....	99.1	99.5
			April.....	99.1	99.5
1937			May.....	99.1	99.5
January.....	102.7	98.7	June.....	99.1	99.5
February.....	104.0	99.9	July.....	99.1	99.5
March.....	105.4	100.4	August.....	99.1	99.9
April.....	105.4	101.1	September.....	101.8	100.7
May.....	105.4	101.1			

Specification: Douglas fir, dimension, No. 1 common, 2 by 4 inches by 16 feet, S4S; per M board feet.

Wholesale: In mixed carlots, mill to retail yard, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 140.—*Douglas fir, dimension, No. 1*

REGION V. SOUTH ATLANTIC

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	92.9	81.5	June.....	105.0	101.4
February.....	92.9	81.5	July.....	105.0	101.4
March.....	92.9	81.5	August.....	105.0	101.4
April.....	92.9	81.5	September.....	105.0	101.4
May.....	95.3	81.5	October.....	102.6	100.9
June.....	95.3	81.5	November.....	100.2	100.9
July.....	100.2	82.1	December.....	97.8	100.3
August.....	100.2	82.1			
September.....	100.2	82.1	1938		
October.....	100.2	82.1	January.....	97.8	100.3
November.....	100.2	82.1	February.....	96.5	100.3
December.....	100.2	81.5	March.....	97.2	99.7
			April.....	97.2	99.7
1936			May.....	97.2	99.2
January.....	101.4	81.5	June.....	97.2	99.2
February.....	101.4	82.1	July.....	97.2	99.2
March.....	101.4	82.1	August.....	98.4	99.2
April.....	101.4	82.1	September.....	98.4	99.2
May.....	101.4	82.1	October.....	98.4	99.2
June.....	100.2	82.1	November.....	98.4	99.7
July.....	100.2	82.1	December.....	99.2	99.7
August.....	100.2	82.1			
September.....	100.2	82.1	1939		
October.....	100.2	82.1	January.....	99.2	99.7
November.....	100.2	82.1	February.....	99.2	99.7
December.....	101.4	82.1	March.....	99.2	99.7
			April.....	99.2	99.7
1937			May.....	99.2	99.5
January.....	102.6	99.2	June.....	99.2	99.5
February.....	103.9	100.9	July.....	99.2	98.1
March.....	105.0	100.9	August.....	99.2	98.1
April.....	105.0	100.9	September.....	101.6	103.7
May.....	105.0	101.4			

Specification: Douglas fir, dimension, No. 1 common, 2 by 4 inches by 16 feet, S4S; per M board feet.

Wholesale: In mixed carlots, mill to retail yard, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 141.—*Douglas fir, dimension, No. 1*

REGION VI. EAST SOUTH CENTRAL

[Wholesale and retail price indexes—July-September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	93.1	-	June.....	104.6	98.9
February.....	93.1	80.9	July.....	104.6	98.9
March.....	93.1	80.9	August.....	104.6	98.9
April.....	93.1	80.9	September.....	104.6	98.9
May.....	95.7	80.9	October.....	102.0	98.9
June.....	95.7	80.9	November.....	99.5	98.9
July.....	100.8	80.9	December.....	96.9	98.9
August.....	98.1	80.9			
September.....	98.1	80.9	1938		
October.....	98.1	80.9	January.....	96.9	98.9
November.....	98.1	80.9	February.....	95.6	98.9
December.....	98.1	80.9	March.....	97.2	98.9
1936			April.....	97.2	98.9
January.....	99.4	80.9	May.....	97.2	98.9
February.....	99.4	80.9	June.....	97.2	98.9
March.....	99.4	80.9	July.....	97.2	98.9
April.....	99.4	80.9	August.....	98.5	98.9
May.....	99.4	80.9	September.....	98.5	98.9
June.....	98.1	80.9	October.....	98.5	98.9
July.....	99.5	80.9	November.....	98.5	98.9
August.....	99.5	80.9	December.....	99.2	100.0
September.....	99.5	80.9			
October.....	99.5	80.9	1939		
November.....	99.5	80.9	January.....	99.2	100.0
December.....	100.7	80.9	February.....	99.2	100.0
1937			March.....	99.2	100.0
January.....	102.0	88.3	April.....	99.2	100.0
February.....	103.3	94.3	May.....	99.2	100.0
March.....	104.6	94.3	June.....	99.2	100.0
April.....	104.6	94.3	July.....	99.2	100.0
May.....	104.6	98.9	August.....	99.2	100.0
			September.....	101.7	100.0

Specification: Douglas fir, dimension, No. 1 common, 2 by 4 inches by 16 feet, S4S; per M board feet.

Wholesale: In mixed carlots, mill to retail yard, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 142.—*Douglas fir, dimension, No. 1*

REGION VII. WEST SOUTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January	91.2	100.0	June	104.5	100.0
February	91.2	100.0	July	104.5	100.0
March	91.2	100.0	August	104.5	100.0
April	91.2	100.0	September	104.5	100.0
May	93.9	100.0	October	102.0	100.0
June	93.9	100.0	November	99.2	100.0
July	99.2	100.0	December	96.6	100.0
August	99.2	100.0	1938		
September	99.2	100.0	January	96.6	100.0
October	99.2	100.0	February	95.2	100.0
November	99.2	100.0	March	97.8	100.0
December	99.2	100.0	April	97.8	100.0
1936			May	97.8	100.0
January	100.5	100.0	June	97.8	100.0
February	100.5	100.0	July	97.8	100.0
March	100.5	100.0	August	97.1	100.0
April	100.5	100.0	September	97.1	100.0
May	100.5	100.0	October	97.1	100.0
June	99.2	100.0	November	97.1	100.0
July	99.2	100.0	December	99.1	100.0
August	99.2	100.0	1939		
September	99.2	100.0	January	99.1	100.0
October	99.2	100.0	February	99.1	100.0
November	99.2	100.0	March	99.1	100.0
December	100.5	100.0	April	99.1	100.0
1937			May	99.1	100.0
January	101.9	100.0	June	99.1	100.0
February	103.2	100.0	July	99.1	100.0
March	104.5	100.0	August	99.1	100.0
April	104.5	100.0	September	101.8	100.0
May	104.5	100.0			

Specification: Douglas fir, dimension, No. 1 common, 2 by 4 inches by 16 feet, S4S; per M board feet.

Wholesale: In mixed carlots, mill to retail yard, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 143.—*Douglas fir, dimension, No. 1*

REGION VIII. ROCKY MOUNTAIN

[Wholesale and retail price indexes—July-September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January	91.1	94.4	June	106.2	112.3
February	91.1	94.4	July	106.2	112.3
March	91.1	96.0	August	106.2	112.0
April	91.1	95.9	September	106.2	112.3
May	94.1	98.7	October	103.2	112.3
June	94.1	101.4	November	100.2	111.4
July	100.1	102.5	December	97.1	107.7
August	100.1	102.5	1938		
September	100.1	103.2	January	97.1	105.4
October	100.1	101.4	February	95.6	105.4
November	100.1	100.9	March	97.5	105.4
December	100.1	100.9	April	97.5	105.4
1936			May	97.5	103.6
January	101.6	100.9	June	97.5	103.6
February	101.6	101.8	July	97.5	103.1
March	101.6	101.5	August	99.0	103.1
April	101.6	101.5	September	99.0	103.1
May	101.6	101.5	October	99.0	102.4
June	100.1	101.5	November	99.0	102.4
July	100.1	101.5	December	99.0	102.4
August	100.1	101.5	1939		
September	100.1	101.0	January	99.0	102.4
October	100.1	101.0	February	99.0	103.1
November	100.1	101.0	March	99.0	103.1
December	101.6	102.1	April	99.0	103.1
1937			May	99.0	99.4
January	103.2	103.0	June	99.0	99.4
February	104.7	105.5	July	99.0	99.4
March	106.2	111.6	August	99.0	100.3
April	106.2	111.6	September	102.0	100.3
May	106.2	112.3			

Specification: Douglas fir, dimension, No. 1 common, 2 by 4 inches by 16 feet, S4S; per M board feet.

Wholesale: In mixed carlots, mill to retail yard, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 144.—*Douglas fir, dimension, No. 1*

REGION IX. PACIFIC

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	91.0	91.5	June.....	107.4	106.7
February.....	91.0	91.5	July.....	107.4	111.3
March.....	91.0	91.5	August.....	107.4	111.0
April.....	91.0	83.8	September.....	107.4	110.6
May.....	94.3	91.1	October.....	104.1	110.1
June.....	94.3	89.4	November.....	100.8	110.7
July.....	100.8	88.9	December.....	97.5	109.6
August.....	100.8	89.1			
September.....	100.8	88.8	1938		
October.....	100.8	88.5	January.....	97.5	100.4
November.....	100.8	88.9	February.....	95.9	100.1
December.....	100.8	93.5	March.....	97.2	100.2
			April.....	97.2	100.3
1936			May.....	97.2	100.2
January.....	102.5	93.2	June.....	97.2	100.1
February.....	102.5	93.8	July.....	97.2	100.1
March.....	102.5	92.8	August.....	98.8	97.7
April.....	102.5	93.1	September.....	98.8	97.9
May.....	102.5	93.7	October.....	98.8	97.6
June.....	100.8	93.6	November.....	98.8	97.7
July.....	100.8	93.3	December.....	98.9	97.7
August.....	100.8	93.4			
September.....	100.8	97.3	1939		
October.....	100.8	97.2	January.....	98.9	97.9
November.....	100.8	97.3	February.....	98.9	98.6
December.....	102.5	104.0	March.....	98.9	98.5
			April.....	98.9	98.2
1937			May.....	98.9	93.5
January.....	104.1	116.3	June.....	98.9	93.5
February.....	105.7	116.0	July.....	98.9	93.6
March.....	107.4	116.4	August.....	98.9	103.2
April.....	107.4	107.3	September.....	102.2	103.2
May.....	107.4	107.3			

Specification: Douglas fir, dimension, No. 1 common, 2 by 4 inches by 16 feet, S4S; per M board feet.

Wholesale: In mixed carlots, mill to retail yard, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

CHAPTER XIII

OAK FLOORING

DESCRIPTION OF THE INDUSTRY

The production of oak lumber in the United States exceeds that of any other hardwood, and is surpassed by only three softwoods—yellow pine, Douglas fir, and Ponderosa pine. In 1937, oak lumber represented 6 percent of all lumber production and 36 percent of all hardwood, according to the Census of Manufactures.¹ The following summary gives the amount produced and the average value at mill for the years indicated.

Year	Production		Year	Production	
	1,000 board feet	Average value		1,000 board feet	Average value
1929.....	2, 574, 495	\$38. 43	1935.....	1, 194, 577	\$27. 15
1981.....	953, 559	27. 68	1937.....	1, 581, 682	29. 60
1933.....	697, 595	28. 53			

Oak is produced in all States except those in the Rocky Mountain area and the Dakotas. In 1937, 8 States, located in the Appalachians south of the Ohio River and on the lower Mississippi, accounted for 68 percent of the national output. Map VI shows the geographical location of the leading producing States, and table 145 gives the 1937 production, by States, as published in the Census of Manufactures.

TABLE 145.—*Geographical Distribution of oak lumber production, 1937*

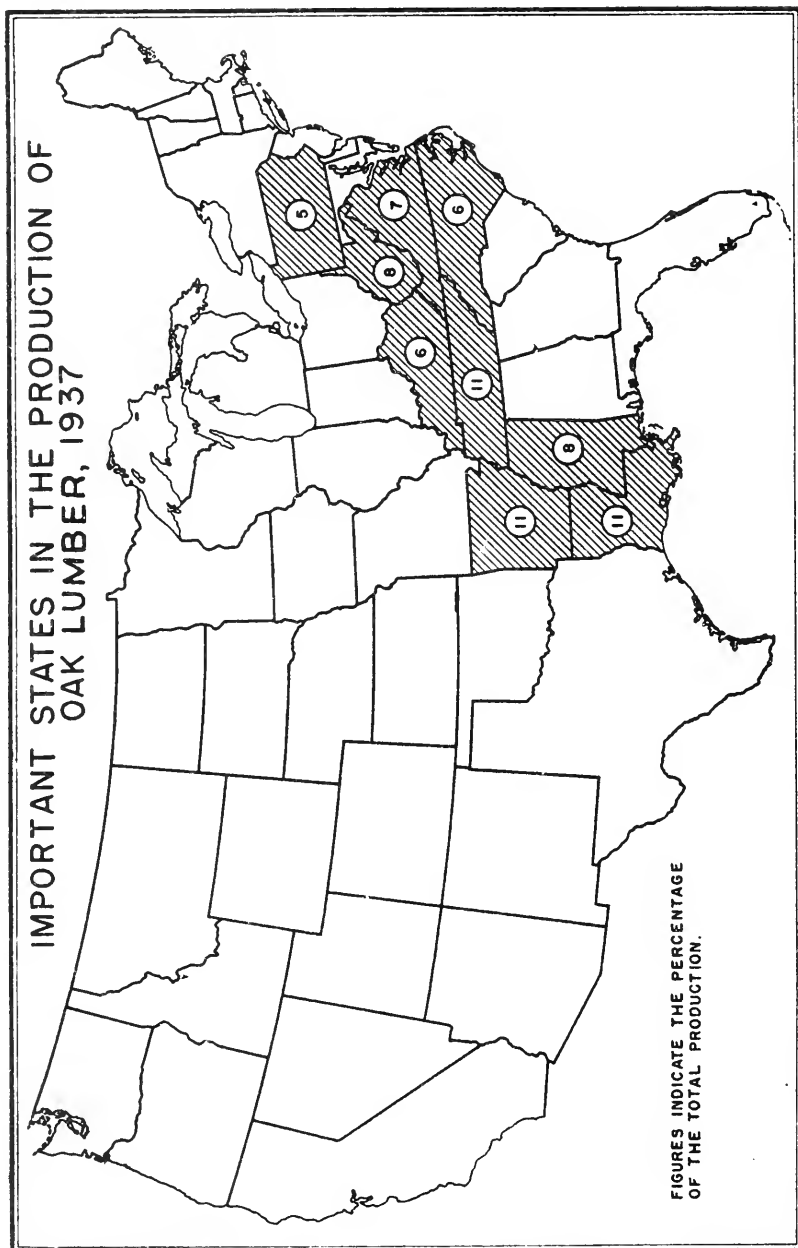
State	Production		State	Production	
	1,000 board feet	Percent of total		1,000 board feet	Percent of total
Louisiana.....	179, 425	11	Alabama.....	67, 141	4
Tennessee.....	171, 616	11	Ohio.....	53, 394	3
Arkansas.....	169, 720	11	Indiana.....	46, 739	3
Mississippi.....	133, 097	8	Missouri.....	31, 848	2
West Virginia.....	131, 990	8	Georgia.....	20, 209	1
Virginia.....	104, 113	7	South Carolina.....	18, 396	1
North Carolina.....	96, 875	6	Illinois.....	16, 835	1
Kentucky.....	97, 879	6	Wisconsin.....	15, 667	1
Pennsylvania.....	84, 955	5	Other States (20) ¹		7
Texas.....	70, 153	4			

¹ California, Connecticut, Delaware, Florida, Iowa, Kansas, Maine, Maryland, Massachusetts, Michigan, Minnesota, Nebraska, New Hampshire, New Jersey, New York, Oklahoma, Oregon, Rhode Island, Vermont, Washington.

Source: Census of Manufactures, 1937: Production of lumber by kind and by States, table 10, p. 517.

¹ Census of Manufacturers, 1937: Lumber and timber products not elsewhere classified, table 7, pp. 499, ff.

MAP VI

IMPORTANT STATES IN THE PRODUCTION OF
OAK LUMBER, 1937FIGURES INDICATE THE PERCENTAGE
OF THE TOTAL PRODUCTION.

It is estimated that about one-half the production of oak is used in the building industry, primarily as flooring, as the cost prohibits the use of oak for most other construction purposes.

Although definite data are not available on the concentration of production within the industry, the National Oak Flooring Manufacturers' Association estimates that nine firms produce 30 to 35 percent of the national total.

In general, a firm producing oak flooring does not handle any other important types of lumber. A few companies mill other types, but the flooring mill is usually a separate unit.

There are two general groups of oak flooring—white and red, the latter accounting for about 75 percent of production in September 1939. There are many grades and sizes of flooring. One producer publishes quotations on 13 grades of eight sizes each. It was not necessary to include all grades in the survey and, on the advice of the industry, only one grade and size was priced as representative of all types. This specification was "Flooring, oak, red, select, plain, $1\frac{3}{16}$ by $2\frac{1}{4}$ inches face, average length 4 feet." Seventy-five to 80 percent of all oak flooring produced is of this size. The term "plain" distinguishes plain sawed from quarter sawed,² which is more costly. The grading rules established by the National Oak Flooring Manufacturers' Association specify that the select grade, on the face, may contain sap, and will permit pin worm holes, streaks, slight imperfections in working or a small tight knot, not to exceed one every 3 feet. Some members of the industry distinguish between "Appalachian oak," produced in Tennessee, West Virginia, Virginia, and the Carolinas, and "Southern oak," produced in Mississippi, Arkansas, Louisiana, and adjoining areas, and consider the former to have softer and finer texture, and therefore better quality than the "Southern," but no distinction of this kind was made in the present study.

PRICE STRUCTURE

Basing Point System.

Oak flooring is sold on a multiple basing-point system, with basing points at Memphis, Tenn.; Johnson City, Tenn.; and Alexandria, La. The delivered price to any destination is the f. o. b. basing-point price, plus the lowest freight from any basing point to such destination. This delivered price is rounded to the nearest 50-cent interval; thus a base quotation of \$65 per thousand board feet in carlots, plus a freight charge of \$7.80, would be quoted f. o. b. destination at \$73, while, if the freight charge were \$7.70, the destination price would be \$72.50 per thousand board feet. Using this plan, the purchaser in one city may pay slightly more than the base price, plus freight, and the purchaser in another city may pay slightly less. The National Oak Flooring Manufacturers' Association publishes freight rates from each of the basing points to all destinations.

Compliance with the basing-point system is not universal in the industry, according to some manufacturers interviewed. One reason for this is the lack of geographical concentration. With oak flooring produced in over half the States, it would be difficult to obtain conformity by all mills to a system wherein the three basing points are

² Plain sawing is the cutting of lumber of consecutive cuts in order to obtain maximum yield. In quarter sawed lumber, the cut is made parallel with the pith and approximately at right angles with the growth rings, so that the grain forms an angle of 45 degrees or more with the face of the board.

all located in the South. However, association members report that the bulk of oak flooring is sold in accordance with the system described. Sales at wholesale are made in carlots to building material dealers, priced per thousand board feet, f. o. b. basing points, plus freight to destination.

Channels of Distribution.

Sales are made either through brokers, who receive an 8 percent discount, through commission men who receive 4 percent, or direct from mill, either by traveling salesmen or on direct order. Most producers sell on a Nation-wide basis. The usual discount for cash is 2 percent 10 days, or 2 percent, 10th proximo.

PRICE LEVELS AND TRENDS

Prices and Transportation Costs.

Destination prices at wholesale vary with the freight costs from basing points. For example, assuming a base price at Memphis, Tenn., of \$60, the freight per thousand board feet to St. Louis, Mo., is \$4, or 6½ percent of the delivered price of \$64, while the freight to Butte, Mont., is \$16, or 21 percent of the delivered price of \$76.³ Although freight rates change frequently, these changes seldom affect the net destination price at any city by more than \$1 per thousand board feet. Changes in the freight rate structure may alter the area controlled by each basing point. For example, the rate effective in December 1935, caused the delivered price at Cleveland, Ohio, to be based upon freight from Johnson City, Tenn., where previously it had been computed f. o. b. Memphis. Three major changes in freight rates occurred during the period covered by this survey—in December 1935, July 1937, and September 1938. Table 147 illustrates the effective rail freight rates, by destinations. The table does not show all minor revisions in freight rates because of the practice of rounding freight costs to the nearest 50-cent interval. Many cities that are quite far apart, geographically, have the same freight rates, due to the division of the United States into freight rate zones, according to commodities. The zone system of rates applies to carlot shipments.

³ The percentages for all the cities are shown in table 146.

TABLE 146.—*Ratio of transportation costs to wholesale delivered price of oak flooring, September 1939*

Region and city	Wholesale delivered price	Freight cost	
		Amount (all-rail)	Percent of delivered price
Region I (New England):	<i>Per M board feet</i>	<i>Per M board feet</i>	
A. Portland, Maine.....	\$69.50	\$9.50	13.7
B. Manchester, N. H.....	69.00	9.00	13.0
C. Burlington, Vt.....	70.00	10.00	14.3
D. Boston, Mass.....	69.00	9.00	13.0
E. Providence, R. I.....	69.00	9.00	13.0
F. Hartford, Conn.....	68.50	8.50	12.4
Region II (Middle Atlantic):			
A. New York, N. Y.....	68.00	8.00	11.8
B. Trenton, N. J.....	67.50	7.50	11.1
C. Philadelphia, Pa.....	67.00	7.00	10.4
Region III (East North Central):			
A. Cleveland, Ohio.....	67.00	7.00	10.4
B. Detroit, Mich.....	67.00	7.00	10.4
C. Indianapolis, Ind.....	66.00	6.00	9.1
D. Chicago, Ill.....	66.00	6.00	9.1
E. Milwaukee, Wis.....	67.00	7.00	10.4
Region IV (West North Central):			
A. Minneapolis, Minn.....	68.00	8.00	11.8
B. Fargo, N. Dak.....	70.50	10.50	14.9
C. Sioux Falls, S. Dak.....	68.50	8.50	12.4
D. Des Moines, Iowa.....	66.50	6.50	9.8
E. Omaha, Nebr.....	67.00	7.00	10.4
F. Wichita, Kans.....	67.00	7.00	10.4
G. St. Louis, Mo.....	64.00	4.00	6.3
Region V (South Atlantic):			
A. Wilmington, Del.....	67.00	7.00	10.4
B. Baltimore, Md.....	67.00	7.00	10.4
C. Washington, D. C.....	67.00	7.00	10.4
D. Charleston, W. Va.....	65.50	5.50	8.4
E. Richmond, Va.....	65.00	5.00	7.7
F. Charlotte, N. C.....	63.50	3.50	5.5
G. Charleston, S. C.....	65.00	5.00	7.7
H. Atlanta, Ga.....	63.50	3.50	5.5
I. Miami, Fla.....	68.00	8.00	11.8
Region VI (East South Central):			
A. Louisville, Ky.....	63.50	3.50	5.5
B. Memphis, Tenn.....	60.00		
C. Birmingham, Ala.....	63.50	3.50	5.5
D. Jackson, Miss.....	63.50	3.50	5.5
Region VII (West South Central):			
A. Little Rock, Ark.....	63.50	3.50	5.5
B. Oklahoma City, Okla.....	66.00	6.00	9.1
C. Austin, Tex.....	65.50	5.50	8.4
D. Houston, Tex.....	63.00	3.00	4.8
E. New Orleans, La.....	62.50	2.50	4.0
Region VIII (Rocky Mountain):			
A. Butte, Mont.....	76.00	16.00	21.1
B. Boise, Idaho.....	76.00	16.00	21.1
C. Cheyenne, Wyo.....	71.50	11.50	16.1
D. Denver, Colo.....	71.00	11.00	15.5
E. Salt Lake City, Utah.....	76.00	16.00	21.1
F. Reno, Nev.....	76.00	16.00	21.1
G. Phoenix, Ariz.....	75.50	15.50	20.5
H. Albuquerque, N. Mex.....	71.50	11.50	16.1
Region IX (Pacific):			
A. Seattle, Wash.....	76.00	16.00	21.1
B. Portland, Oreg.....	76.00	16.00	21.1
C. Los Angeles, Calif.....	76.00	16.00	21.1

TABLE 147.—*Freight charges on oak flooring*

Region and city	Freight charge (per 1,000 board feet)			
	Jan. 1935	Dec. 1935	July 1937	Sept. 1938
Region I (New England):				
A. Portland, Maine.....	\$9.60	\$8.00	\$8.50	\$9.50
B. Manchester, N. H.....	9.00	7.50	8.50	9.00
C. Burlington, Vt.....	9.50	8.50	9.50	10.00
D. Boston, Mass.....	9.00	7.50	8.50	9.00
E. Providence, R. I.....	9.00	7.50	8.50	9.00
F. Hartford, Conn.....	8.50	7.50	8.00	8.50
Region II (Middle Atlantic):				
A. New York, N. Y.....	8.50	7.00	8.00	8.00
B. Trenton, N. J.....	7.50	6.50	7.00	7.50
C. Philadelphia, Pa.....	7.00	6.00	6.50	7.00
Region III (East North Central):				
A. Cleveland, Ohio.....	7.00	6.00	7.00	7.00
B. Detroit, Mich.....	7.00	6.00	7.00	7.00
C. Indianapolis, Ind.....	6.00	6.00	6.00	6.00
D. Chicago, Ill.....	6.00	6.00	6.00	6.00
E. Milwaukee, Wis.....	6.50	6.50	6.50	7.00
Region IV (West North Central):				
A. Minneapolis, Minn.....	7.50	7.50	7.50	8.00
B. Fargo, N. Dak.....	10.00	10.00	10.50	10.50
C. Sioux Falls, S. Dak.....	8.00	8.00	8.00	8.50
D. Des Moines, Iowa.....	6.00	6.00	6.00	6.50
E. Omaha, Nebr.....	7.00	7.00	7.00	7.00
F. Wichita, Kans.....	7.00	7.00	7.00	7.00
G. St. Louis, Mo.....	3.50	3.50	3.50	4.00
Region V (South Atlantic):				
A. Wilmington, Del.....	7.00	6.00	6.50	7.00
B. Baltimore, Md.....	7.00	6.00	6.50	7.00
C. Washington, D. C.....	7.00	6.00	6.50	7.00
D. Charleston, W. Va.....	5.50	5.50	5.50	5.50
E. Richmond, Va.....	5.00	5.00	5.00	5.00
F. Charlotte, N. C.....	3.50	3.50	3.50	3.50
G. Charleston, S. C.....	5.00	5.00	5.00	5.00
H. Atlanta, Ga.....	3.50	3.50	3.50	3.50
I. Miami, Fla.....	8.00	8.00	8.00	8.00
Region VI (East South Central):				
A. Louisville, Ky.....	3.50	3.50	3.50	3.50
B. Memphis, Tenn.....	(¹) 3.50	(¹) 3.50	(¹) 3.50	(¹) 3.50
C. Birmingham, Ala.....	3.50	3.50	3.50	3.50
D. Jackson, Miss.....	3.50	3.50	3.50	3.50
Region VII (West South Central):				
A. Little Rock, Ark.....	3.50	3.50	3.50	3.50
B. Oklahoma City, Okla.....	6.50	6.50	6.00	6.00
C. Austin, Tex.....	5.00	5.00	5.00	5.50
D. Houston, Tex.....	3.00	3.00	3.00	3.00
E. New Orleans, La.....	2.50	2.50	2.50	2.50
Region VIII (Rocky Mountain):				
A. Butte, Mont.....	16.00	16.00	15.00	16.00
B. Boise, Idaho.....	16.00	16.00	15.00	16.00
C. Cheyenne, Wyo.....	11.00	11.00	11.00	11.50
D. Denver, Colo.....	10.00	10.00	10.00	11.00
E. Salt Lake City, Utah.....	16.00	16.00	14.50	16.00
F. Reno, Nev.....	16.00	16.00	15.00	16.00
G. Phoenix, Ariz.....	14.50	14.50	14.50	15.50
H. Albuquerque, N. Mex.....	12.00	12.00	11.00	11.50
Region IX (Pacific):				
A. Seattle, Wash.....	16.00	16.00	15.00	16.00
B. Portland, Oreg.....	16.00	16.00	15.00	16.00
C. Los Angeles, Calif.....	16.00	16.00	15.00	16.00

¹ One basing point.

Changes in freight rates are not effective at the same time for each of the three basing points. Adjustments are made from time to time between the rates from the three bases to various destinations in an effort to equalize markets and competitive conditions between members of the industry, trade areas, and common carriers.

Retail prices are quoted per thousand board feet delivered to the job site. Prices may vary between contractors purchasing from the same dealer. In quoting a price to a contractor, the dealer considers the buyer's volume of purchases, whether or not he buys exclusively from one dealer, his credit rating, and various other factors. Retail

dealers have a tendency to maintain more stable prices than are quoted by manufacturers and usually disregard minor fluctuations in the wholesale market.

Geographical Differences in Prices and Spreads. (See chart XVII and table 148.)

While variations in wholesale prices between localities are due entirely to freight differentials, retail prices may be affected by many purely local factors. The following summary shows the typical wholesale and retail prices by cities.

Price range (per 1,000 board feet)	Number of cities		Price range (per 1,000 board feet)	Number of cities	
	Whole-sale	Retail		Whole-sale	Retail
\$60 to \$64	9	2	\$95 to \$99		2
\$65 to \$69	23		\$100 to \$104		1
\$70 to \$74	5	3	\$105 to \$109		3
\$75 to \$79	8	10	\$110 to \$114		1
\$80 to \$84		6	\$115 to \$119		1
\$85 to \$89		9	\$120 to \$124		1
\$90 to \$94		4	\$125 and over		2

This table reveals much more marked geographical variations at retail than at wholesale. While the largest number of retail quotations falls within the \$75 to \$79 range, the median is in the \$85 to \$89 range. The wholesale median is within the \$65 to \$69 range where the largest number of quotations are found.

The spread between wholesale and retail prices varies greatly from city to city. The following table gives the averages of the typical wholesale and retail quotations in each region, and the difference between the two:

Region	Whole-sale price	Retail price	Difference	
	Per 1,000 board feet		Amount	Percent
Region I. New England	\$69.17	\$85.00	\$15.83	23
Region II. Middle Atlantic	67.50	79.17	11.67	17
Region III. East North Central	66.60	79.64	13.04	20
Region IV. West North Central	67.36	86.61	19.25	29
Region V. South Atlantic	65.72	79.06	13.34	20
Region VI. East South Central	62.62	67.50	4.88	8
Region VII. West South Central	64.10	88.00	23.90	37
Region VIII. Rocky Mountain	74.19	111.74	37.55	51
Region IX. Pacific	76.00	91.23	15.23	20
United States average	68.12	87.20	19.08	28

The averages of wholesale and retail prices for all regions were \$68.12 and \$87.20, respectively. This is an average spread of \$19.08, or 28 percent. The smallest differential between wholesale and retail prices was in the East South Central States, all but one of which are in the list of eight States leading in oak production. The widest difference occurred in the Rocky Mountain area, in which, according to the Census of Manufactures, no oak is produced. Six of the eight cities in that area reported retail prices over \$100 per thousand with one reporting \$142.50. The highest wholesale price reported for any city

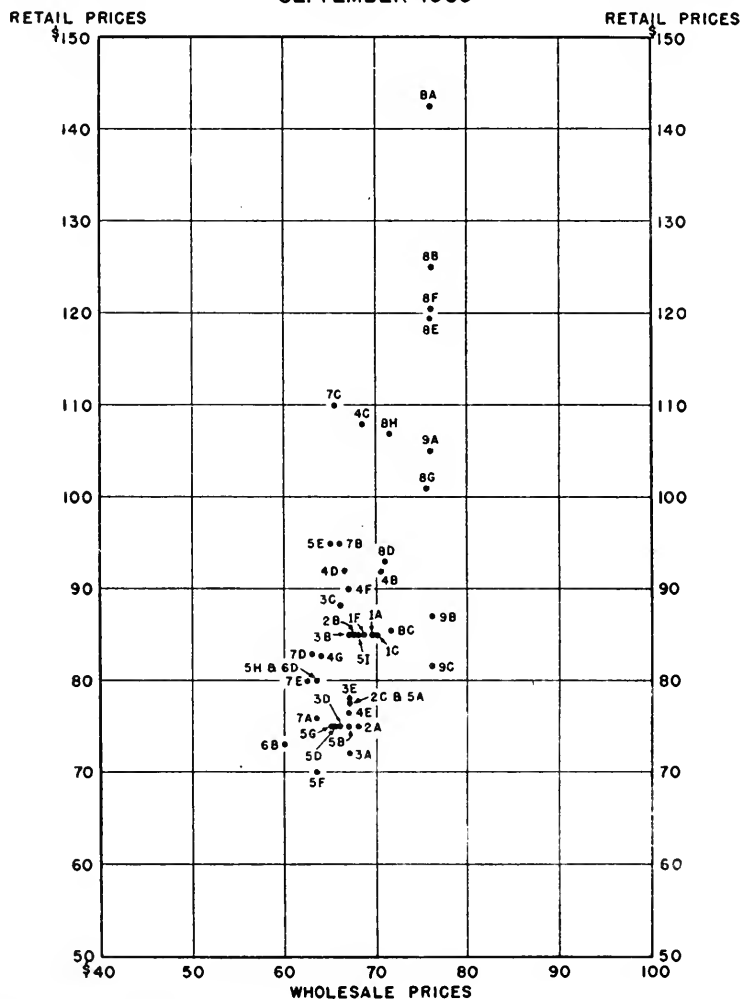
in the region was \$76 per thousand board feet. Local market conditions may account for the wide spreads in the Rocky Mountain area. Many retail dealers explained that little oak flooring of the specified

CHART XVII

OAK FLOORING

WHOLESALE AND RETAIL PRICES FOR SELECTED CITIES

SEPTEMBER 1939



U. S. BUREAU OF LABOR STATISTICS

grade was sold, most of the flooring used being a cheaper grade of oak or other type of wood.

Price Trends. (See tables 149 to 158.)

The wide fluctuations in prices of oak flooring are illustrated by chart XVIII, showing indexes for the United States and for each of

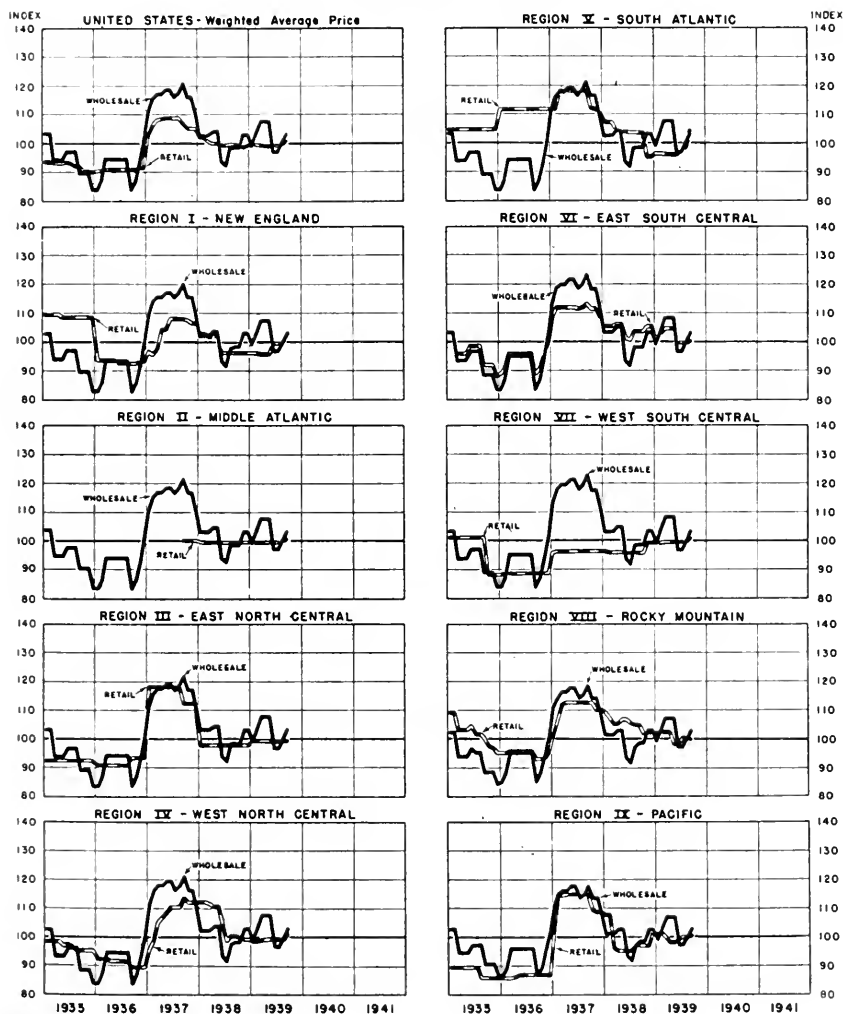
the nine regions for the period 1935 through 1939, with average prices in the third quarter of 1939 as a basis for comparison. In the country as a whole, prices at wholesale declined throughout 1935 until by

CHART XVIII

OAK FLOORING

WHOLESALE AND RETAIL PRICE INDEXES

JULY - SEPTEMBER 1939 = 100



UNITED STATES BUREAU OF LABOR STATISTICS

the year end, they were down by 19 percent. Early in 1936 they rose 13 percent then dropped back, reaching previous level by September 1936. From this point prices of flooring rose rapidly as construction increased and by September 1937 reached the peak for the period covered by the survey, representing a total gain of about 45 percent

from the 1935 low. Prices then declined until July 1938, falling 24 percent, followed by a gradual rise until the spring of 1939. After a period of slight weakening the trend during August and September was upward, and prices in September 1939 were at approximately the same level as in January 1935.

Wholesale prices in each of the nine regions followed approximately the same course as those in the Nation generally, with only minor variations due to changes in transportation costs.

Retail prices of oak flooring on the whole, followed a course parallel to those in the wholesale markets although changes were less frequent. Beginning in January 1935, prices showed a slight decline with little change in 1936, while wholesale prices varied over a wide range. In the first half of 1937, however, they rose 19 percent with most of the change occurring in the first 3 months. Prices started to decline in September 1937 and by the middle of 1938 had fallen about 8 percent. From that time through September 1939, the level did not vary over 2 percent. It must be noted, of course, in comparing wholesale and retail prices, that a change of \$1 in price effects a much larger percentage change in wholesale than in retail prices since the wholesale price is much lower.

In some regions, retail prices for oak flooring have adhered more closely to the wholesale pattern than did the retail prices as a whole, showing higher levels in 1937. This is true for the East North Central, West North Central, East South Central, Rocky Mountain, and Pacific States, where the trend of retail prices does not differ significantly from the wholesale trend. It is especially interesting to note that, although the general trend of retail prices is quite similar to the wholesale prices in several regions, the closest relationship between the two series is to be found in the producing areas of the South.

In the New England area, retail prices showed no appreciable change until the beginning of 1936, when they dropped 15 percent. Prices remained relatively stable from then until 1937, when they rose to approximately the same level as in 1935. Starting in the latter part of 1937, a gradual decline of 11 percent occurred until the spring of 1939, after which the index rose about 5 percent by midsummer.

In the South Atlantic States, the index rose from 105 in January 1935 to 118 in the summer of 1937, by 6 percent steps at the beginning of 1936 and 1937. From September 1937 the trend was downward until 1939, with a rise during the base period from 96 in June to 104 in September.

In the West South Central region the retail price index followed the drop in wholesale prices in 1935, falling about 13 percent by the end of that year, but remained unchanged through 1936. While the wholesale level rose 45 percent in 1937, the retail index for this area increased only 12 percent in the first 2 months of the year, then remained practically unchanged until the end of 1938, when a 4 percent increase occurred. Prices in 1939 showed little change through September.

TABLE 148.—*Oak flooring*

[Typical wholesale and retail prices for selected cities, September 1939]

Region and city	Prices		Region and city	Prices	
	Whole-sale	Retail		Whole-sale	Retail
REGION I. NEW ENGLAND			REGION V. SOUTH ATLANTIC—CON.		
A. Portland, Maine.....	\$69.50	\$85.00	G. Charleston, S. C.....	\$65.00	\$75.00
C. Burlington, Vt.....	70.00	85.00	H. Atlanta, Ga.....	63.50	80.00
F. Hartford, Conn.....	68.50	85.00	I. Miami, Fla.....	68.00	85.00
REGION II. MIDDLE ATLANTIC			REGION VI. EAST SOUTH CENTRAL		
A. New York, N. Y.....	68.00	75.00	A. Louisville, Ky.....	63.50	61.00
B. Trenton, N. J.....	67.50	85.00	B. Memphis, Tenn.....	60.00	73.00
C. Philadelphia, Pa.....	67.00	77.50	D. Jackson, Miss.....	63.50	80.00
REGION III. EAST NORTH CENTRAL			REGION VII. WEST SOUTH CENTRAL		
A. Cleveland, Ohio.....	67.00	72.00	A. Little Rock, Ark.....	63.50	76.00
B. Detroit, Mich.....	67.00	85.00	B. Oklahoma City, Okla.....	66.00	95.00
C. Indianapolis, Ind.....	66.00	88.20	C. Austin, Tex.....	65.50	110.00
D. Chicago, Ill.....	66.00	75.00	D. Houston, Tex.....	63.00	83.00
E. Milwaukee, Wis.....	67.00	78.00	E. New Orleans, La.....	62.50	80.00
REGION IV. WEST NORTH CENTRAL			REGION VIII. ROCKY MOUNTAIN		
A. Minneapolis, Minn.....	68.00	65.00	A. Butte, Mont.....	76.00	142.50
B. Fargo, N. Dak.....	70.50	92.00	B. Boise, Idaho.....	76.00	125.00
C. Sioux Falls, S. Dak.....	68.50	108.00	C. Cheyenne, Wyo.....	71.50	85.50
D. Des Moines, Iowa.....	66.50	92.00	D. Denver, Colo.....	71.00	93.00
E. Omaha, Nebr.....	67.00	76.50	E. Salt Lake City, Utah.....	76.00	119.40
F. Wichita, Kans.....	67.00	90.00	F. Reno, Nev.....	76.00	120.50
G. St. Louis, Mo.....	64.00	82.75	G. Phoenix, Ariz.....	75.50	101.00
REGION V. SOUTH ATLANTIC			H. Albuquerque, N. Mex.....	71.50	107.00
A. Wilmington, Del.....	67.00	77.50	REGION IX. PACIFIC		
B. Baltimore, Md.....	67.00	75.00	A. Seattle, Wash.....	76.00	105.00
D. Charleston, W. Va.....	65.50	75.00	B. Portland, Oreg.....	76.00	87.00
E. Richmond, Va.....	65.00	95.00	C. Los Angeles, Calif.....	76.00	81.60
F. Charlotte, N. C.....	63.50	70.00			

Specification: Oak, red, flooring, select, plain, 1 $\frac{3}{4}$ - by 12 $\frac{1}{4}$ -inch face, average length 4 feet; per M board feet.

Wholesale: Carlots, mill to retail yard, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 149.—*Oak flooring*
COMPOSITE UNITED STATES AVERAGE

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	103.3	93.5	June.....	118.7	108.9
February.....	103.3	93.5	July.....	116.3	108.8
March.....	94.2	93.1	August.....	117.8	108.9
April.....	94.2	93.1	September.....	120.9	106.9
May.....	94.2	93.1	October.....	116.3	105.4
June.....	97.2	93.2	November.....	116.3	105.2
July.....	97.2	93.0	December.....	110.3	105.0
August.....	97.2	92.2	1938		
September.....	89.6	91.8	January.....	102.7	102.1
October.....	89.6	90.3	February.....	102.7	102.0
November.....	89.6	90.3	March.....	102.7	100.6
December.....	83.8	90.0	April.....	104.2	100.0
1936			May.....	104.2	100.0
January.....	83.8	90.4	June.....	93.6	99.5
February.....	86.9	90.5	July.....	92.1	99.2
March.....	94.4	90.7	August.....	98.2	99.6
April.....	94.4	90.8	September.....	98.5	99.6
May.....	94.4	90.9	October.....	98.5	99.5
June.....	94.4	90.9	November.....	103.0	98.7
July.....	94.4	90.9	December.....	103.0	99.2
August.....	94.4	90.9	1939		
September.....	83.8	90.9	January.....	99.2	99.4
October.....	86.9	91.0	February.....	103.0	99.5
November.....	92.9	91.2	March.....	107.6	99.4
December.....	100.5	91.6	April.....	107.6	99.2
1937			May.....	107.6	99.0
January.....	111.0	102.7	June.....	97.0	99.1
February.....	115.6	106.1	July.....	97.0	99.3
March.....	117.1	108.0	August.....	100.0	99.6
April.....	117.1	108.5	September.....	103.0	100.8
May.....	118.7	108.6			

Specification: Oak, red, flooring, select, plain, $1\frac{3}{4}$ by $2\frac{1}{4}$ -inch face, average length 4 feet; per M board feet.

Wholesale: Carlots, mill to retail yard, f.o.b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 150.—Oak flooring

REGION I. NEW ENGLAND

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	102.9	109.7	June.....	117.2	107.9
February.....	102.9	109.7	July.....	115.6	107.9
March.....	94.0	109.7	August.....	117.1	107.9
April.....	94.0	109.7	September.....	120.1	107.9
May.....	94.0	108.5	October.....	115.6	107.5
June.....	97.0	108.5	November.....	115.6	106.6
July.....	97.0	108.5	December.....	109.7	106.6
August.....	97.0	108.5			
September.....	89.5	108.5	1938		
October.....	89.5	108.5	January.....	102.2	102.9
November.....	89.5	108.5	February.....	102.2	102.9
December.....	82.9	108.5	March.....	102.2	102.0
1936			April.....	103.7	102.0
January.....	82.9	93.6	May.....	103.7	102.3
February.....	85.9	93.6	June.....	93.3	96.3
March.....	93.4	93.6	July.....	91.8	96.3
April.....	93.4	93.6	August.....	97.7	96.3
May.....	93.4	93.6	September.....	98.5	96.3
June.....	93.4	92.6	October.....	98.5	96.3
July.....	93.4	92.6	November.....	103.0	96.3
August.....	93.4	92.4	December.....	103.0	96.3
September.....	82.9	92.4			
October.....	85.9	92.4	1939		
November.....	91.9	92.9	January.....	99.3	96.3
December.....	99.3	93.1	February.....	103.0	96.3
1937			March.....	107.5	95.8
January.....	109.8	96.6	April.....	107.5	95.8
February.....	114.3	95.5	May.....	107.5	95.8
March.....	115.7	97.3	June.....	97.0	99.6
April.....	115.7	104.4	July.....	97.0	99.6
May.....	117.2	104.4	August.....	100.0	100.2
			September.....	103.0	100.2

Specification: Oak, red, flooring, select, plain, $1\frac{3}{4}$ by 24-inch face, average length 4 feet; per M board feet.

Wholesale: Carlots, mill to retail yard, f.o.b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 151.—*Oak flooring*

REGION II.—MIDDLE ATLANTIC

[Wholesale and retail price indexes—July-September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January	103.7	-----	June	118.2	-----
February	103.7	-----	July	116.6	-----
March	94.6	-----	August	118.1	-----
April	94.6	-----	September	121.2	100.0
May	94.6	-----	October	116.6	100.0
June	97.7	-----	November	116.6	100.0
July	97.7	-----	December	110.6	100.0
August	97.7	-----	1938		
September	90.1	-----	January	103.0	99.8
October	90.1	-----	February	103.0	99.8
November	90.1	-----	March	103.0	99.8
December	83.3	-----	April	104.5	99.8
1936			May	104.5	99.8
January	83.3	-----	June	93.9	99.8
February	86.3	-----	July	92.4	99.8
March	93.9	-----	August	98.4	99.8
April	93.9	-----	September	98.5	99.8
May	93.9	-----	October	98.5	99.8
June	93.9	-----	November	103.0	99.8
July	93.9	-----	December	103.0	99.8
August	93.9	-----	1939		
September	83.3	-----	January	99.2	99.8
October	86.3	-----	February	103.0	99.8
November	92.4	-----	March	107.6	99.8
December	100.0	-----	April	107.6	99.8
1937			May	107.6	99.8
January	110.5	-----	June	97.0	99.8
February	115.2	-----	July	97.0	99.8
March	116.7	-----	August	100.0	99.8
April	116.7	-----	September	103.0	100.5
May	118.2	-----			

Specification: Oak, red, flooring, select, plain, 1½" by 2¼-inch face, average length 4 feet; per M board feet.

Wholesale: Carlots, mill to retail yard, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 152.—Oak flooring

REGION III.—EAST NORTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	103.1	92.4	June.....	119.0	118.3
February.....	103.1	92.4	July.....	117.0	118.3
March.....	93.8	92.4	August.....	118.5	118.3
April.....	93.8	92.4	September.....	121.6	112.4
May.....	93.8	92.4	October.....	117.0	112.4
June.....	96.9	92.4	November.....	117.0	112.4
July.....	96.9	92.4	December.....	110.8	112.4
August.....	96.9	92.4			
September.....	89.1	92.4	1938		
October.....	89.1	92.4	January.....	103.1	97.9
November.....	89.1	92.4	February.....	103.1	97.9
December.....	83.5	92.3	March.....	103.1	97.9
1936			April.....	104.6	97.9
January.....	83.5	90.8	May.....	104.6	97.9
February.....	86.6	90.8	June.....	93.8	97.9
March.....	94.3	90.8	July.....	92.2	97.9
April.....	94.3	90.8	August.....	98.4	97.9
May.....	94.3	90.8	September.....	98.5	97.9
June.....	94.3	90.8	October.....	98.5	97.9
July.....	94.3	90.8	November.....	103.1	97.9
August.....	94.3	90.8	December.....	103.1	97.9
September.....	83.5	93.2			
October.....	86.6	93.2	1939		
November.....	92.8	93.2	January.....	99.2	99.2
December.....	100.5	93.2	February.....	103.1	99.2
1937			March.....	107.7	99.2
January.....	111.3	118.3	April.....	107.7	99.2
February.....	115.9	118.3	May.....	107.7	99.2
March.....	117.5	118.3	June.....	96.9	99.0
April.....	117.5	118.3	July.....	96.9	99.0
May.....	119.0	118.3	August.....	100.0	99.4
			September.....	103.1	99.4

Specification: Oak, red, flooring, select, plain, $1\frac{3}{4}$ by $2\frac{3}{4}$ -inch face, average length 4 feet; per M board feet.

Wholesale: Carlots, mill to retail yard. f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 153.—Oak flooring

REGION IV. WEST NORTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January	102.5	98.4	June	119.5	110.6
February	102.5	98.4	July	116.4	110.6
March	93.2	98.4	August	118.0	110.6
April	93.2	98.4	September	121.1	113.8
May	93.2	96.9	October	116.4	112.2
June	96.3	97.4	November	116.4	112.2
July	96.3	96.9	December	110.2	112.2
August	96.3	95.4	1938		
September	88.5	95.4	January	102.5	112.4
October	88.5	95.4	February	102.5	112.4
November	88.5	95.4	March	102.5	111.9
December	83.9	95.4	April	104.0	110.8
1936			May	104.0	110.8
January	83.9	92.4	June	93.2	104.3
February	87.0	92.4	July	91.7	99.0
March	94.7	92.4	August	97.9	100.6
April	94.7	91.8	September	98.5	100.6
May	94.7	91.8	October	98.5	99.8
June	94.7	91.8	November	103.1	99.6
July	94.7	91.7	December	103.1	99.6
August	94.7	91.7	1939		
September	83.9	89.6	January	99.2	98.7
October	87.0	89.6	February	103.1	98.7
November	93.2	89.6	March	107.7	99.1
December	100.9	89.6	April	107.7	99.4
1937			May	107.7	99.6
January	111.8	96.0	June	96.9	99.6
February	116.4	98.9	July	96.9	99.6
March	118.0	105.1	August	100.0	99.2
April	118.0	107.0	September	103.1	101.2
May	119.5	108.7			

Specification: Oak, red, flooring, select, plain, $1\frac{3}{4}$ - by $2\frac{1}{4}$ -inch face, average length 4 feet; per M board feet.

Wholesale: Carlots, mill to retail yard, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 154.—*Oak flooring*

REGION V. SOUTH ATLANTIC

[Wholesale and retail price indexes—July-September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January	103.1	104.9	June	119.2	118.1
February	103.1	104.9	July	116.6	118.1
March	93.8	104.9	August	118.1	118.1
April	93.8	104.9	September	121.2	118.1
May	93.8	104.9	October	116.6	112.3
June	96.9	104.9	November	116.6	111.9
July	96.9	104.9	December	110.4	110.9
August	96.9	104.9	1938		
September	89.2	104.9	January	102.6	107.4
October	89.2	104.9	February	102.6	107.4
November	89.2	104.9	March	102.6	107.0
December	83.6	104.9	April	104.2	104.0
1936			May	104.2	104.0
January	83.6	111.9	June	93.4	104.0
February	86.7	111.9	July	91.8	103.6
March	94.4	111.9	August	98.0	103.6
April	94.4	111.9	September	98.5	103.6
May	94.4	111.9	October	98.5	103.6
June	94.4	111.9	November	103.1	95.2
July	94.4	111.9	December	103.1	95.2
August	94.4	111.9	1939		
September	83.6	111.9	January	99.2	96.5
October	86.7	111.9	February	103.1	96.5
November	92.9	111.9	March	107.7	96.4
December	100.6	111.9	April	107.7	96.4
1937			May	107.7	96.3
January	111.5	111.8	June	96.9	96.3
February	116.1	112.3	July	96.9	97.1
March	117.7	118.1	August	100.0	98.7
April	117.7	118.1	September	103.1	104.3
May	119.2	118.1			

Specification: Oak, red, flooring, select, plain, 1 $\frac{3}{4}$ - by 2 $\frac{3}{4}$ -inches face, average length 4 feet; per M board feet.

Wholesale: Carlots, mill to retail yard, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 155.—Oak flooring

REGION VI. EAST SOUTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole sale	Retail		Whole sale	Retail
1935			1937—Continued		
January.....	103.3	-----	June.....	121.6	112.1
February.....	103.3	-----	July.....	118.3	111.5
March.....	93.4	95.9	August.....	119.9	112.1
April.....	93.4	95.9	September.....	123.3	113.3
May.....	93.4	95.9	October.....	118.3	111.5
June.....	96.7	98.7	November.....	118.3	111.5
July.....	96.7	98.7	December.....	111.6	108.5
August.....	96.7	98.7	1938		
September.....	88.4	91.9	January.....	103.3	105.5
October.....	88.4	91.9	February.....	103.3	105.5
November.....	88.4	91.9	March.....	103.3	105.5
December.....	83.4	87.8	April.....	105.0	106.1
1936			May.....	105.0	106.1
January.....	83.4	88.9	June.....	93.4	101.3
February.....	86.7	90.9	July.....	91.7	100.7
March.....	95.0	95.9	August.....	98.3	103.7
April.....	95.0	95.9	September.....	98.3	103.7
May.....	95.0	95.9	October.....	98.3	103.7
June.....	95.0	95.9	November.....	103.3	105.5
July.....	95.0	95.9	December.....	103.3	105.5
August.....	95.0	95.9	1939		
September.....	83.4	88.9	January.....	99.2	101.0
October.....	86.7	90.9	February.....	103.3	102.8
November.....	93.4	94.9	March.....	108.3	104.6
December.....	101.7	100.8	April.....	108.3	104.6
1937			May.....	108.3	104.6
January.....	113.3	109.1	June.....	96.7	99.8
February.....	118.7	112.1	July.....	96.7	99.8
March.....	119.9	112.1	August.....	100.0	99.8
April.....	119.9	112.1	September.....	103.3	100.4
May.....	121.6	112.1			

Specification: Oak, red, flooring, select, plain, 1 $\frac{3}{4}$ - by 2 $\frac{1}{4}$ -inch face, average length 4 feet; per M board feet.

Wholesale: Carlots, mill to retail yard, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 156.—Oak flooring

REGION VII. WEST SOUTH CENTRAL

[Wholesale and retail price indexes—July-September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January	103.2	101.2	June	121.1	96.2
February	103.2	101.2	July	117.7	96.2
March	93.5	101.2	August	119.4	96.2
April	93.5	101.2	September	122.6	96.2
May	93.5	101.2	October	117.7	96.2
June	96.8	101.2	November	117.7	96.2
July	96.8	101.2	December	111.3	96.2
August	96.8	101.2	1938		
September	88.6	101.2	January	103.1	96.2
October	88.6	88.1	February	103.1	95.9
November	88.6	88.1	March	103.1	95.9
December	83.8	88.1	April	104.8	95.9
1936			May	104.8	95.9
January	83.8	88.1	June	93.4	95.7
February	87.0	88.5	July	91.8	95.7
March	95.1	88.5	August	98.3	95.7
April	95.1	88.5	September	98.4	95.7
May	95.1	88.5	October	98.4	95.7
June	95.1	88.5	November	103.2	99.4
July	95.1	88.5	December	103.2	99.4
August	95.1	88.5	1939		
September	83.8	88.5	January	99.2	99.4
October	87.0	88.5	February	103.2	99.4
November	93.5	88.5	March	108.1	99.5
December	101.6	88.5	April	108.1	99.5
1937			May	108.1	99.5
January	113.0	95.8	June	96.8	99.5
February	117.9	96.2	July	96.8	99.5
March	119.5	96.2	August	100.0	99.5
April	119.5	96.2	September	103.2	100.9
May	121.1	96.2			

Specification: Oak, red, flooring, select, plain, 1 $\frac{3}{4}$ - by 2 $\frac{1}{4}$ -inch face, average length 4 feet; per M board feet.

Wholesale: Carlots, mill to retail yard, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 157.—Oak flooring

REGION VIII. ROCKY MOUNTAIN

[Wholesale and retail price indexes—July-September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	102.1	109.3	June.....	117.6	112.6
February.....	102.1	109.3	July.....	114.0	112.6
March.....	93.7	103.1	August.....	115.4	112.6
April.....	93.7	103.1	September.....	118.2	112.6
May.....	93.7	103.1	October.....	114.0	112.6
June.....	96.5	104.6	November.....	114.0	109.7
July.....	95.1	101.6	December.....	108.4	110.3
August.....	95.1	101.6	1938		
September.....	88.2	100.0	January.....	101.4	109.4
October.....	88.2	97.7	February.....	101.4	107.4
November.....	88.2	97.1	March.....	101.4	105.3
December.....	84.1	95.3	April.....	102.8	105.3
1936			May.....	102.8	106.7
January.....	85.3	95.3	June.....	93.0	106.7
February.....	88.1	95.3	July.....	91.6	105.3
March.....	95.1	95.5	August.....	97.2	104.9
April.....	95.1	95.5	September.....	98.6	104.9
May.....	95.1	95.5	October.....	98.6	101.9
June.....	95.1	95.5	November.....	102.9	102.1
July.....	95.1	95.5	December.....	102.9	102.1
August.....	95.1	95.5	1939		
September.....	85.3	92.8	January.....	99.3	102.3
October.....	88.1	92.8	February.....	102.8	102.3
November.....	93.7	92.8	March.....	107.0	102.3
December.....	100.7	95.4	April.....	107.0	102.3
1937			May.....	107.0	98.3
January.....	110.6	100.1	June.....	97.2	98.1
February.....	113.9	106.6	July.....	97.2	100.1
March.....	116.2	112.0	August.....	100.0	100.1
April.....	116.2	112.6	September.....	102.8	99.8
May.....	117.6	112.6			

Specification: Oak, red, flooring, select, plain, $1\frac{3}{4}$ - by $2\frac{1}{4}$ -inch face, average length 4 feet; per M board feet.

Wholesale: Carlots, mill to retail yard, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 158.—Oak flooring

REGION IX. PACIFIC

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	102.7	89.4	June.....	117.6	114.9
February.....	102.7	89.4	July.....	113.5	114.9
March.....	94.6	89.4	August.....	114.9	114.9
April.....	94.6	89.4	September.....	117.6	114.9
May.....	94.6	89.4	October.....	113.5	109.4
June.....	97.3	89.4	November.....	113.5	108.6
July.....	97.3	89.4	December.....	108.1	108.6
August.....	97.3	85.6	1938		
September.....	90.5	85.6	January.....	101.4	107.7
October.....	90.5	85.6	February.....	101.4	107.7
November.....	90.5	85.6	March.....	101.4	96.8
December.....	86.5	85.6	April.....	102.7	95.0
1936			May.....	102.7	95.0
January.....	86.5	85.6	June.....	93.2	95.0
February.....	89.2	85.6	July.....	91.9	95.0
March.....	95.9	85.6	August.....	97.3	97.5
April.....	95.9	86.0	September.....	98.6	97.1
May.....	95.9	86.8	October.....	98.6	97.1
June.....	95.9	86.8	November.....	102.7	97.1
July.....	95.9	86.8	December.....	102.7	101.2
August.....	95.9	86.8	1939		
September.....	86.5	86.8	January.....	99.3	101.2
October.....	89.2	86.8	February.....	102.7	101.2
November.....	94.6	86.8	March.....	106.8	99.9
December.....	101.4	86.8	April.....	106.8	98.2
1937			May.....	106.8	98.2
January.....	110.8	101.3	June.....	97.3	99.0
February.....	114.9	114.6	July.....	97.3	100.0
March.....	116.2	114.6	August.....	100.0	100.0
April.....	116.2	114.9	September.....	102.7	100.2
May.....	117.6	114.9			

Specification: Oak, red, flooring, select, plain, $1\frac{3}{16}$ by $2\frac{1}{4}$ -inch face, average length 4 feet; per M board feet.

Wholesale: Carlots, mill to retail yard, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

CHAPTER XIV

YELLOW PINE

DESCRIPTION OF THE INDUSTRY

The production of yellow pine in 1937 was 7,691,476,000 board feet, exceeding that of any other kind of lumber, and representing approximately 30 percent of the total volume of lumber produced in the nation and 36 percent of all softwood. The following table shows the production and average mill value of yellow pine, 1929-37, as published in the 1937 Census of Manufactures.¹

Year	Production		Year	Production	
	1,000 board feet	Average value at mill		1,000 board feet	Average value at mill
1929.....	11,629,689	\$25.66	1935.....	5,960,246	\$18.24
1931.....	4,429,643	16.99	1937.....	7,691,476	22.18
1933.....	4,445,577	17.91			

Yellow pine is produced in 19 States, with 10 States producing 95 percent of the national total. These 10 States, with the single exception of Arkansas, border on the east coast, extending from Virginia along the Atlantic seaboard and the Gulf coast to Texas. Map VII shows the geographical area in which production is heavy, and the following table gives production, by States, in 1937.

TABLE 159.—*Geographical distribution of production of yellow pine, 1937*

State	Production		State	Production	
	1,000 board feet	Percent of total		1,000 board feet	Percent of total
Alabama.....	1,121,482	15	Florida.....	521,455	7
Texas.....	953,659	12	South Carolina.....	416,920	5
North Carolina.....	862,957	11	Virginia.....	413,705	5
Mississippi.....	846,882	11	Oklahoma.....	144,216	2
Arkansas.....	791,968	10	Tennessee.....	96,818	1
Louisiana.....	738,148	10	Other States (7) ¹	59,047	1
Georgia.....	724,219	9			

¹ Other States include Delaware, Kentucky, Maryland, Missouri, New Jersey, Pennsylvania, and West Virginia.

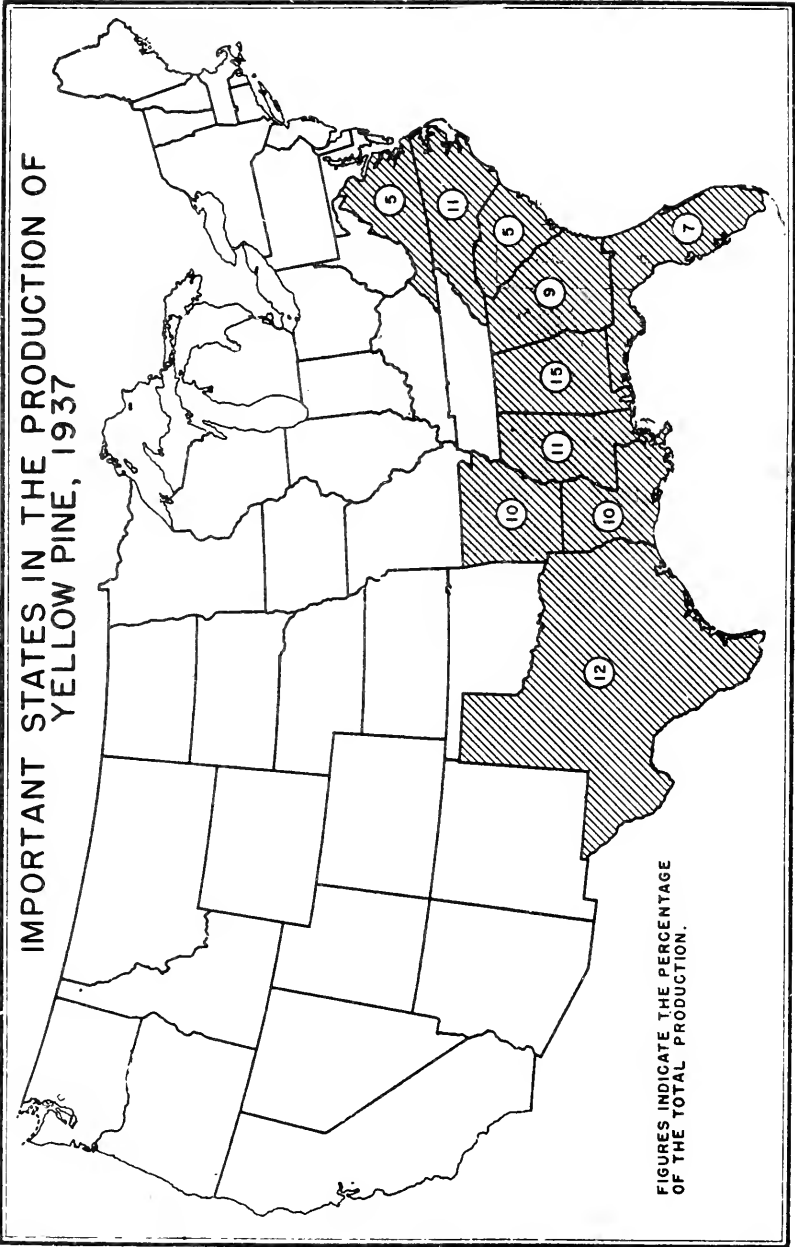
Source: Census of Manufactures, 1937: "Production of lumber by kind and by States," table 10, p. 515.

A large number of mills are engaged in sawing yellow pine lumber, and none of these is large enough to dominate the industry. Data from the Department of Commerce show that the four leading firms produce only 7 percent of the national total. Many small, portable

¹ Census of Manufactures, 1937: "Lumber and timber products not elsewhere classified," table 7, p. 507.

MAP VII

IMPORTANT STATES IN THE PRODUCTION OF
YELLOW PINE, 1937



FIGURES INDICATE THE PERCENTAGE
OF THE TOTAL PRODUCTION.

mills are used in cutting pine lumber and, as little capital is necessary, most of these are independently owned.

The trade association for the industry lists approximately 75 general and 30 specialty products manufactured by its member mills. These cover almost all uses for lumber, from toy stocks to massive ship timbers. Of the many types of yellow pine lumber used in residential construction, the one selected for pricing in this survey was "Boards, No. 2 common, 1 by 8 inch, standard lengths, short leaf." The trend of prices for boards should show the price trend of other yellow pine used in residential construction.

PRICE STRUCTURE

Method of Computing Delivered Prices.

Theoretically, delivered prices of yellow pine may be computed by adding freight costs to f. o. b. mill prices. Each mill that furnished prices for the survey quoted an f. o. b. mill price, to which was added freight cost to any desired destination. Freight charges were based on freight rates obtained from the Interstate Commerce Commission, various railroad companies, and from the lumber producers. No water freight costs could be obtained as such costs include not only freight rates but storage, stevedoring, and insurance. In certain areas rail costs from mill to port and port to destination would also be involved. Due to these difficulties, all destination prices for yellow pine at wholesale in this survey are computed on f. o. b. mill prices plus rail transportation costs. They may, therefore, not be entirely accurate for some points.

Under the N. R. A. code, yellow pine was sold on a multiple basing-point system, with basing points for each of three sales areas, and certain freight absorptions or additions specified for each. The basing points for west of the Mississippi were Elizabeth and Alexandria, La., and for the central territory the basing point was Hattiesburg, Miss. For the east coast, the delivered price was f. o. b. mill, plus 13½ cents per 100 pounds freight charge from Goldsboro, N. C., to certain Virginia cities, plus actual freight from the Virginia cities to point of destination.

However, most manufacturers interviewed reported that the f. o. b. mill price is frequently cut to bring the delivered price in line with that of mills more favorably situated freightwise. The bulk and weight of lumber make freight costs an important element in the delivered price. The amount of change in the price of lumber and the amount of freight absorption vary through time and with each destination. Certain manufacturers do not attempt to sell in areas where they consider freight costs to be too great.

Prices of yellow pine are also affected by competition with Douglas fir in certain regions. Along the east coast² and in the West North Central area the delivered costs of the two species are approximately the same. As the two types of lumber may be used for many of the same purposes, prices may be reduced by producers of either in an effort to obtain a desired order.

A very important element in the production and sale of yellow pine is the number of small, usually portable, mills. As previously mentioned, these mills require small capital and only a few employees.

² Douglas fir is shipped to the east coast by water through the Panama Canal.

Usually they sell to a more or less local market, and therefore are not subject to Federal regulations governing interstate business, such as the provisions of the Fair Labor Standards Act. The employees are frequently farmers or farm laborers who work at the mills to obtain a little ready cash during periods when farm work is slack. As a result, the unit cost of production in the small mill may be less than in large mills selling across State lines and employing a large number of men throughout the year. The small mills frequently sell at prices so low that large mills cannot enter the local market, but must depend altogether on interstate business.

Commission to Distributor.

Yellow pine is sold to building material dealers direct from the mill, through brokers, and by commission men. Sales direct from the mill are made by traveling salesmen and by telephone and telegraph. The only discount ordinarily allowed the buyer on this type of sale is a cash discount of 2 percent for cash within 10 days, net 10th proximo. Brokers are allowed a commission of 8 percent, part of which reflects the assumption by the brokers of all credit risks and costs of collection. The commission salesman, who assumes no credit risks, is allowed 5 percent.

The wholesaler with warehouse facilities receives the same discount as the broker, but apparently plays an unimportant role in the sale of this product. This type of wholesaler buys in carlots, stores the lumber, and sells to small retailers in less than carlot quantities.

PRICE LEVELS AND TRENDS

Wholesale price quotations used in this survey are per thousand board feet, carlots in mixed cars, mill to retail yard, f. o. b. cars, destination. This implies delivery, f. o. b. cars, at the railroad siding nearest the dealer's yard or warehouse. The retail price quotation used was per thousand board feet, dealer to contractor, delivered to job site, city.

Prices and Spreads.

The primary factor causing the geographical variation in the price of southern yellow pine boards is transportation cost. Mills in any section of the producing area sell at approximately the same price. The delivered prices, however, vary according to destination with the freight rate being the determining factor.

Pine boards of the type specified in this study are delivered to most consuming centers in the South for approximately \$5 per thousand feet. Rail freight on shipments to Washington, D. C., runs \$9 to \$12; when the mill price is \$20, transportation costs amount to 60 percent. If southern pine were shipped to Butte, Mont., the freight charges would be approximately equal to the price at the mill. In other words, the geographical variation, if the lumber is shipped by rail, is from \$20 at the mill in the South to \$39 at the farthest destination in the United States.³

The variation in retail prices between the cities included in the study was also wide. The average of the typical prices in 31 cities was \$34.40 per thousand board feet. However, the prices varied, as shown in the following summary.

³ Little, if any, southern pine lumber is shipped into the Ponderosa pine or Douglas fir producing areas. Therefore, it is not likely that the maximum rate is used to any extent. It is probable that in localities where yellow pine is distributed, the maximum rail freight charged is \$13 to \$14 per thousand board feet.

Prices	Number of cities	Prices	Number of cities
\$20 to \$24.99.....	3	\$35 to \$39.99.....	14
\$25 to \$29.99.....	2	\$40 to \$44.99.....	5
\$30 to \$34.99.....	7		

Fourteen, or almost one-half of the cities, were in the \$35 to \$40 group. The average of the retail prices in these cities was \$36.76 while the average of wholesale prices was \$28.41. Based on these figures, the average spread on southern pine boards was 29.4 percent of the dealers' cost.

Price Trends. (See chart XIX and tables 160 to 165.)

Prices of yellow pine are much more variable than for other types of lumber. They are changed more often and more widely and vary greatly by localities because of local conditions.

In the New England, Middle Atlantic, East North Central, and South Atlantic areas the wholesale price indexes constructed by the Bureau followed the same general pattern for the period from 1935 to September 1939. Remaining unchanged through 1935 and 1936, the index rose 7 percent in 1937, and then returned to its former level until September 1939, when it rose 3 percent. In the East South-Central region wholesale prices changed more frequently than in the four regions previously mentioned. In 1935, despite minor fluctuations, the index at the end of the year was 89.3, the same as at the beginning. Increases in February 1936, in April, and again in December brought the index to 97.9. This was followed by an increase of 22 percent which brought the index to 119 in February 1937. This level held for only 2 months. A series of price declines began in April, and by July the level was the same as in January. This downswing continued until June 1938 when a low of 76.4 was reached. In July a rise began which reached 100 in December, which level was maintained until September 1939 except for a minor drop during July and August. Wholesale price data for the West South Central region are not available at present for the period prior to 1939.

The trends of the composite retail price closely parallel the movements in the wholesale series, except that in the last half of 1938 and 1939 retail prices advanced 8 percent while wholesale prices rose only 4 percent. There was only a slight upward movement from January 1935 to November 1936. A rapid rise occurred, however, in the next few months; the Bureau's index, based on the third quarter of 1939=100, increased from 87 in November 1936 to 94 in January 1937. Only moderate changes were effected over the next 2½ years. The index number declined slowly to 91 in April 1938 and then rose moderately to 95 in June 1939. Sharp increases were reported rather generally in the summer of 1939. The composite index advanced 5 percent from 95 in June to 100 in September, when this survey was made.

The month-to-month fluctuations in retail prices differ somewhat for the various regions, but, in general, reflect the movements of the composite. In most of the areas prices changed slowly in 1935 and 1936, but advanced sharply in early 1937. There was a large decline in 1938 and recovery in 1939.

In the New England area retail prices followed wholesale prices during most of the period, but showed more changes and a wider

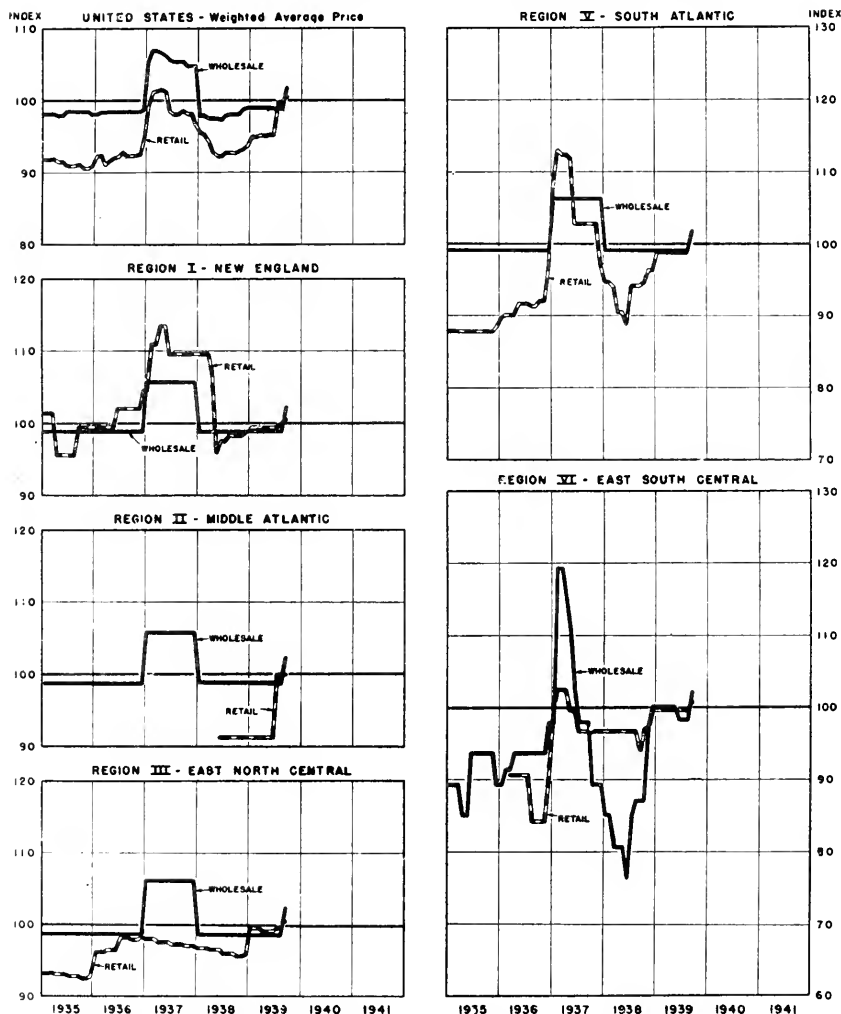
spread from low to high. The Bureau's index, based on the third quarter of 1939=100, reached its low point following a 6 percent drop in April 1935, but a series of small increases from September

CHART XIX

SOUTHERN PINE BOARDS

WHOLESALE AND RETAIL PRICE INDEXES

JULY - SEPTEMBER 1939 = 100



UNITED STATES BUREAU OF LABOR STATISTICS

1935 through April 1937 carried the index to a level 19 percent above the low point. A 3 percent decrease in July 1937 was followed by a period of stability until April 1938 when a decline started that brought prices in May to a point 12 percent below the March level.

A slow rise from this point carried through September 1939, when the index was 5 percent above May 1938.

In the South Atlantic area, the wholesale price index changed only three times from 1935 to date. In 1 month, January 1937, the index rose 7 percent and showed no further change in the next 12 months. However, in January 1938, it declined to the former level. A slight increase occurred in October 1939. The retail price index increased only 5 percent from November 1935 to November 1936 but prices advanced 22 percent during the next 3 months and the index reached a peak of 113 in February 1937. During the recession prices declined steadily, losing 24 percent between April 1937 and June 1938 when the index was 89. Subsequently prices had advanced by more than 12 percent to September 1939 when this survey was made.

The retail index for the East South Central States dropped in the latter part of 1936, then rose 22 percent to a peak of 102.4 in February 1937. It declined about 6 percent from that time until July 1937 and remained relatively unchanged until the end of 1938, when it reached approximately the base level of 100. The great drop in the wholesale index for this region (36 percent from March 1937 to June 1938) was only reflected in a 5 percent drop in the retail level over the same period, which seems to indicate a relatively large average spread between wholesale and retail prices during this period.

TABLE 160.—*Southern pine boards*
COMPOSITE UNITED STATES AVERAGE

[Wholesale and retail price indexes—July-September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	98.2	91.8	June.....	105.7	98.4
February.....	98.2	91.8	July.....	105.4	98.0
March.....	98.2	91.9	August.....	105.4	98.0
April.....	97.9	91.5	September.....	105.4	98.6
May.....	97.9	91.5	October.....	104.8	98.1
June.....	98.5	91.0	November.....	104.8	98.1
July.....	98.5	90.9	December.....	104.8	96.5
August.....	98.5	90.9			
September.....	98.5	91.1	1938		
October.....	98.5	90.6	January.....	97.9	95.5
November.....	98.5	90.6	February.....	97.9	95.3
December.....	98.2	90.9	March.....	97.6	94.2
			April.....	97.6	92.8
1936			May.....	97.6	92.3
January.....	98.2	92.3	June.....	97.3	93.1
February.....	98.4	92.4	July.....	97.9	92.7
March.....	98.4	91.1	August.....	98.1	92.7
April.....	93.5	91.6	September.....	98.1	92.6
May.....	98.5	92.0	October.....	98.1	92.9
June.....	98.5	92.2	November.....	98.8	93.2
July.....	98.5	92.8	December.....	99.0	93.7
August.....	98.5	92.3			
September.....	98.5	92.3	1939		
October.....	98.5	92.4	January.....	99.0	94.9
November.....	98.5	92.5	February.....	99.0	94.9
December.....	98.8	94.7	March.....	99.0	95.1
			April.....	99.6	95.0
1937			May.....	99.0	95.1
January.....	105.4	99.1	June.....	98.9	95.1
February.....	106.9	101.1	July.....	98.9	99.7
March.....	106.9	101.3	August.....	98.9	99.8
April.....	106.6	101.5	September.....	101.8	100.4
May.....	106.3	101.2			

Specification: Pine, southern, boards, No. 2 common, 1 by 8 inches, standard lengths, shortleaf, per M board feet.

Wholesale: Carlots, mill to retail yards, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 161.—*Southern pine boards*

REGION I. NEW ENGLAND

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	98.9	101.4	June.....	105.7	109.6
February.....	98.9	101.4	July.....	105.7	109.6
March.....	98.9	101.4	August.....	105.7	109.6
April.....	98.9	95.7	September.....	105.7	109.6
May.....	98.9	95.7	October.....	105.7	109.6
June.....	98.9	95.7	November.....	105.7	109.6
July.....	98.9	95.7	December.....	105.7	109.6
August.....	98.9	95.7	1938		
September.....	98.9	99.5	January.....	98.9	109.6
October.....	98.9	99.5	February.....	98.9	109.6
November.....	98.9	99.5	March.....	98.9	109.6
December.....	98.9	99.5	April.....	98.9	107.0
1936			May.....	98.9	96.0
January.....	98.9	99.5	June.....	98.9	97.4
February.....	98.9	99.5	July.....	98.9	97.4
March.....	98.9	99.5	August.....	98.9	98.3
April.....	98.9	99.5	September.....	98.9	98.3
May.....	98.9	99.5	October.....	98.9	98.3
June.....	98.9	102.0	November.....	98.9	98.3
July.....	98.9	102.0	December.....	98.9	98.8
August.....	98.9	102.0	1939		
September.....	98.9	102.0	January.....	98.9	99.4
October.....	98.9	102.0	February.....	98.9	99.4
November.....	98.9	102.0	March.....	98.9	99.4
December.....	98.9	104.5	April.....	98.9	99.4
1937			May.....	98.9	99.4
January.....	105.7	104.5	June.....	98.9	99.4
February.....	105.7	110.9	July.....	98.9	99.4
March.....	105.7	110.9	August.....	98.9	100.0
April.....	105.7	113.4	September.....	102.2	100.6
May.....	105.7	113.4			

Specification: Pine, southern, boards, No. 2 common, 1 by 8 inches, standard lengths, shortleaf; per M board feet.

Wholesale: Carlots, mill to retail yards, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 162.—*Southern pine boards*

REGION II. MIDDLE ATLANTIC

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	98.8		June.....	105.8	88.3
February.....	98.8		July.....	105.8	88.3
March.....	98.8		August.....	105.8	88.3
April.....	98.8		September.....	105.8	88.3
May.....	98.8		October.....	105.8	88.3
June.....	98.8		November.....	105.8	88.3
July.....	98.8		December.....	105.8	88.3
August.....	98.8				
September.....	98.8		1938		
October.....	98.8		January.....	98.8	88.3
November.....	98.8		February.....	98.8	88.3
December.....	98.8		March.....	98.8	88.3
1936			April.....	98.8	88.3
January.....	98.8		May.....	98.8	91.3
February.....	98.8		June.....	98.8	91.3
March.....	98.8		July.....	98.8	91.3
April.....	98.8		August.....	98.8	91.3
May.....	98.8		September.....	98.8	91.3
June.....	98.8		October.....	98.8	91.3
July.....	98.8		November.....	98.8	91.3
August.....	98.8		December.....	98.8	91.3
September.....	98.8				
October.....	98.8		1939		
November.....	98.8		January.....	98.8	91.3
December.....	98.8		February.....	98.8	91.3
1937			March.....	98.8	91.2
January.....	105.8	88.3	April.....	98.8	91.3
February.....	105.8	88.3	May.....	98.8	91.3
March.....	105.8	88.3	June.....	98.8	91.3
April.....	105.8	88.3	July.....	98.8	100.0
May.....	105.8	88.3	August.....	98.8	100.0
			September.....	102.3	100.0

Specification: Pine, southern, boards, No. 2 common, 1 by 8 inches, standard lengths, shortleaf; per M board feet.

Wholesale: Carlots, mill to retail yards, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 163.—*Southern pine boards*

REGION III. EAST NORTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January	98.8	93.2	June	106.2	97.7
February	98.8	93.2	July	106.2	97.3
March	98.8	93.3	August	106.2	97.3
April	98.8	93.1	September	106.2	97.3
May	98.8	93.1	October	106.2	97.1
June	98.8	93.1	November	106.2	97.1
July	98.8	92.8	December	106.2	97.1
August	98.8	92.8	1938		
September	98.8	92.8	January	98.8	96.8
October	98.8	92.5	February	98.8	96.8
November	98.8	92.5	March	98.8	96.8
December	98.8	92.7	April	98.8	96.6
1936			May	98.8	96.6
January	98.8	96.2	June	98.8	96.6
February	98.8	96.2	July	98.8	96.0
March	98.8	96.2	August	98.8	96.0
April	98.8	96.5	September	98.8	96.0
May	98.8	96.5	October	98.8	95.7
June	98.8	96.5	November	98.8	95.7
July	98.8	98.2	December	98.8	95.9
August	98.8	98.2	1939		
September	98.8	98.2	January	98.8	99.6
October	98.8	97.9	February	98.8	99.6
November	98.8	97.9	March	98.8	99.6
December	98.8	98.4	April	98.8	99.2
1937			May	98.8	99.2
January	106.2	98.0	June	98.8	99.2
February	106.2	98.0	July	98.8	99.5
March	106.2	98.0	August	98.8	99.9
April	106.2	97.7	September	102.5	100.7
May	106.2	97.7			

Specification: Pine, southern, boards, No. 2 common, 1 by 8 inches, standard lengths, shortleaf; per M board feet.

Wholesale: Carlots, mill to retail yards, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 164.—*Southern pine boards*

REGION V. SOUTH ATLANTIC

[Wholesale and retail price indexes—July–September 1939=100.5]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	99.1	87.8	June.....	106.3	102.8
February.....	99.1	87.8	July.....	106.3	102.8
March.....	99.1	87.8	August.....	106.3	102.8
April.....	99.1	87.8	September.....	106.3	102.8
May.....	99.1	87.8	October.....	106.3	102.8
June.....	99.1	87.8	November.....	106.3	102.8
July.....	99.1	87.8	December.....	106.3	97.1
August.....	99.1	87.8			
September.....	99.1	87.8	1938		
October.....	99.1	87.8	January.....	99.1	94.8
November.....	99.1	87.8	February.....	99.1	94.6
December.....	99.1	88.4	March.....	99.1	93.9
1936			April.....	99.1	90.5
January.....	99.1	89.7	May.....	99.1	90.5
February.....	99.1	90.0	June.....	99.1	88.9
March.....	99.1	90.0	July.....	99.1	94.1
April.....	99.1	90.0	August.....	99.1	94.1
May.....	99.1	91.6	September.....	99.1	94.1
June.....	99.1	91.6	October.....	99.1	94.6
July.....	99.1	91.6	November.....	99.1	96.3
August.....	99.1	91.3	December.....	99.1	96.3
September.....	99.1	91.3			
October.....	99.1	92.0	1939		
November.....	99.1	92.0	January.....	99.1	98.8
December.....	99.1	96.9	February.....	99.1	98.8
1937			March.....	99.1	98.8
January.....	106.3	108.0	April.....	99.1	98.8
February.....	106.3	113.0	May.....	99.1	98.8
March.....	106.3	112.4	June.....	99.1	98.8
April.....	106.3	112.4	July.....	99.1	98.8
May.....	106.3	111.8	August.....	99.1	98.8
			September.....	101.8	101.4

Specification: Pine, southern, boards, No. 2 common, 1 by 8 inches, standard lengths, short leaf; per M board feet.

Wholesale: Carlots, mill to retail yards, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 165.—*Southern pine boards*

REGION IV. EAST SOUTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	89.3	.....	June.....	102.2	99.5
February.....	89.3	.....	July.....	97.9	96.6
March.....	89.3	.....	August.....	97.9	96.6
April.....	85.0	.....	September.....	97.9	96.6
May.....	85.0	.....	October.....	89.3	96.6
June.....	93.6	.....	November.....	89.3	96.6
July.....	93.6	.....	December.....	89.3	96.6
August.....	93.6	.....	1938		
September.....	93.6	.....	January.....	85.0	96.6
October.....	93.6	.....	February.....	85.0	96.6
November.....	93.6	.....	March.....	80.7	96.6
December.....	89.3	.....	April.....	80.7	96.6
1936			May.....	80.7	96.6
January.....	89.3	.....	June.....	80.7	96.6
February.....	91.4	.....	July.....	76.4	96.6
March.....	91.4	90.7	August.....	85.0	96.6
April.....	93.6	90.7	September.....	87.1	96.6
May.....	93.6	90.7	October.....	87.1	94.0
June.....	93.6	90.7	November.....	87.1	96.9
July.....	93.6	90.7	December.....	97.9	96.9
August.....	93.6	84.2		100.0	99.6
September.....	93.6	84.2	1939		
October.....	93.6	84.2	January.....	100.0	99.6
November.....	93.6	84.2	February.....	100.0	99.6
December.....	97.9	90.7	March.....	100.0	99.6
1937			April.....	100.0	99.6
January.....	97.9	99.5	May.....	100.0	99.6
February.....	119.3	102.4	June.....	98.3	99.6
March.....	119.3	102.4	July.....	98.3	99.6
April.....	115.0	102.4	August.....	98.3	99.6
May.....	110.7	99.5	September.....	102.2	100.8

Specification: Pine, southern, boards, No. 2 common, 1 by 8 inches, standard lengths, short leaf; per M board feet.

Wholesale: Carlots, mill to retail yards. f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

CHAPTER XV

PONDEROSA PINE

DESCRIPTION OF THE INDUSTRY

Ponderosa pine ranked third among all types of lumber in the number of board feet cut in 1937 and third among the softwoods. It represented approximately 15 percent of the softwood and 13 percent of all lumber. The average mill value of Ponderosa pine, as published in the 1937 Census of Manufactures,¹ was higher than that of Douglas fir or yellow pine, the two leading species of softwood. The following summary gives the production of Ponderosa pine and the mill value for the years indicated.

Year	Production		Year	Production	
	1,000 board feet	Average value at mill		1,000 board feet	Average value at mill
1929.....	3,288,237	\$26.47	1935.....	2,527,553	\$20.40
1931.....	1,822,460	20.48	1937.....	3,307,655	24.53
1933.....	1,689,773	18.57			

Ponderosa pine is produced in 13 States in the Rocky Mountain and Pacific coast areas. According to the 1937 Census of Manufactures, seven of these States account for 99 percent of the national total, and three of them, Oregon, California, and Washington, represent 79 percent. Map VIII indicates the leading producing States, and table 166 gives the Ponderosa pine output, by States, for 1937.

TABLE 166.—*Distribution of Ponderosa pine production, 1937*

State	Production		State	Production	
	1,000 board feet	Percent of total		1,000 board feet	Percent of total
Oregon.....	1,453,067	43.9	Arizona.....	118,587	3.6
California.....	797,816	24.1	South Dakota.....	43,550	1.3
Washington.....	352,716	10.7	Colorado.....	32,230	1.0
Idaho.....	214,039	6.5	Wyoming.....	16,366	(1)
Montana.....	154,709	4.7	Utah.....	5,470	(1)
New Mexico.....	118,986	3.6	Kansas and Nebraska.....	119	(1)

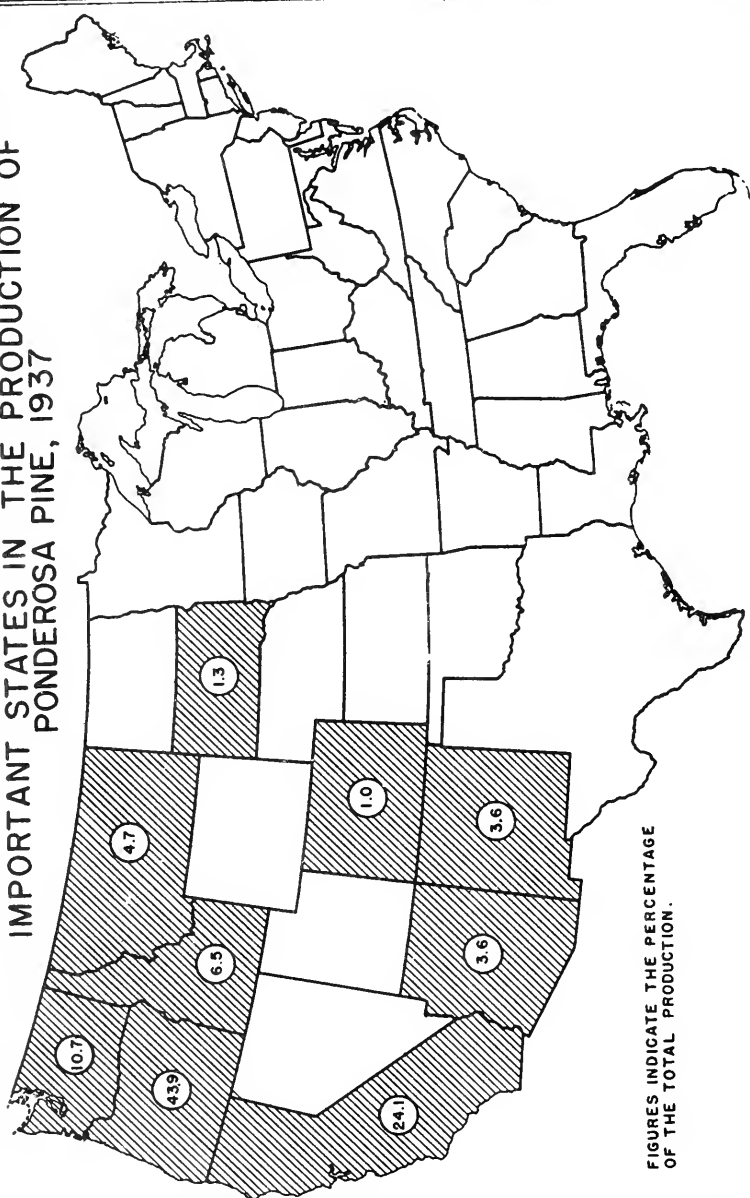
¹ Less than 1 percent.

Source: Census of Manufactures, 1937: Production of lumber by kind and by States, table 10, p. 515.

A great number of mills are operated in the Ponderosa pine industry, but few are large enough to exercise an appreciable effect upon the market. Department of Commerce data show that only 16 percent

¹ Census of Manufactures, 1937: Lumber and timber products not elsewhere classified, table 7, pp. 499, ff.

MAP VIII

IMPORTANT STATES IN THE PRODUCTION OF
PONDEROSA PINE, 1937FIGURES INDICATE THE PERCENTAGE
OF THE TOTAL PRODUCTION.

of the product is supplied by the four largest firms. The concentration here is slightly greater, however, than in the yellow pine industry and slightly less than that of Douglas fir. There are fewer small mills, operating intrastate, in the Ponderosa pine and fir products industries than in yellow pine.

It is estimated that each mill produces 40 or more types of Ponderosa pine products. The uses for this specie vary and are approximately the same as for the other two leading softwoods. One of the chief uses is for millwork, which is discussed in another section of the report. Certain types of finished lumber milled from Ponderosa pine are very costly, but the type selected for pricing in this survey was in the lower price group.² Specifications of the item priced were: Ponderosa pine boards, No. 3 common, 1 by 8 inches, random lengths, S2 or 4S. Wholesale prices were quoted per thousand board feet, carlots in mixed cars, mill to retail dealer, f. o. b. cars at destination. Retail prices quoted were per thousand board feet, dealer to contractor, delivered to job site, city.

PRICE STRUCTURE

Ponderosa pine is sold at wholesale, f. o. b. mill, plus full freight to destination point. The mills quote prices in carlots, f. o. b. mill, with prices in mixed carlots usually slightly higher than for straight carlots. That is, the price for boards might be \$21.50 per thousand if shipped in a car containing boards, dimension, and timbers, but would be \$20 per thousand for a carlot of boards only. There is no formal or systematic plan of equalizing freight costs to the purchaser, but mills meet the competition of more favorably located sellers by lowering the f. o. b. mill price, so that the total cost to the buyer will be the same. Net delivered prices are not equalized against all competitors, as mills usually do not attempt to enter a market in which freight costs are prohibitive. If the net price on sales to certain points is too small the producer leaves that market to mills more favorably situated. Thus, many west coast mills do not sell in the territory east of the Rockies and west of the Mississippi, because they cannot absorb the freight costs necessary for competition with mills in Montana and South Dakota. However, freight to the area east of Chicago is the same from any point in the northwest producing area, and mills can, therefore, compete on an equal basis.

Whereas most of the sales of Douglas fir to the east coast are shipped by water, almost all shipments of Ponderosa pine to the eastern sales area are by rail.

Channels of Distribution.

Sales are made to retail dealers in four ways:

- (1) Direct from mill.
- (2) Through brokers.
- (3) By commission salesmen.
- (4) Through wholesalers.

Sales direct from mill may be made by telephone or telegraph, or the order may be taken by salaried company representatives. A broker usually takes an order from a retailer and then orders shipment direct

² The trend of prices for this product is representative of the movement of prices for the industry as a whole.

from mill to retailer, the broker paying the producer and in turn collecting from the consignee. For this function, the broker receives a discount of 8 percent. The commission salesman merely transmits the order from the dealer to the producer, and usually receives 5 percent commission. The wholesaler buys lumber in carlots from the mill, stores it, and sells to small retailers in less than carlot quantities. Only a small amount of lumber is sold through the wholesaler. The usual cash discount is 2 percent, 10 days or 10th proximo.

PRICE LEVELS AND TRENDS

Destination prices, as quoted by the producers at wholesale, were not available for all cities. When actual destination prices were not quoted by the producer, the approximate price was computed by adding rail freight costs to the f. o. b. mill prices. This method is reasonably accurate in computing levels, even on the east coast, because only a small percentage of the volume sold in this area is shipped by water.

Geographical Differences.

The distance from source to destination is, of course, the dominant factor in the price structure for Ponderosa pine. Freight costs on shipments by rail to the east coast run, at the most, about \$15 per thousand board feet. When the wholesale price is \$20 to \$25 per thousand in the producing area, the destination price over most of the Eastern States is \$35 to \$40.³

These differentials in transportation costs are reflected also in retail prices which varied from \$33.25 in a city in the Pacific region to \$70 in New England. However, 20 out of 33 cities had prices ranging between \$35 and \$49. The price range in various regions is shown in the following summary:

Region	Range of retail prices	Region	Range of retail prices
I. New England.....	\$47.00 to \$70.00.....	IV. West North Central....	\$39.60 to \$46.00.
II. Middle Atlantic.....	\$45.00 to \$60.00.....	VIII. Rocky Mountain.....	\$33.25 to \$50.00.
III. East North Central.....	\$40.00 to \$50.40.....	IX. Pacific.....	\$36.50.

The lowest levels are found in the Rocky Mountain and Pacific areas and the highest in the regions farthest from the producing areas.

Price Trends. (See chart XX and tables 167 to 172.)

The same general wholesale price pattern characterized all parts of the country. The national trend was downward from January 1935 through 1936, a decrease of about 7 percent. A rise at the beginning of 1937 then carried average prices up 14 percent. A decline started at the end of 1937 that produced an aggregate drop of 14 percent by November 1938. There was a sharp rise of 8 percent in December 1938 and a further advance of 5 percent from July to September 1939.

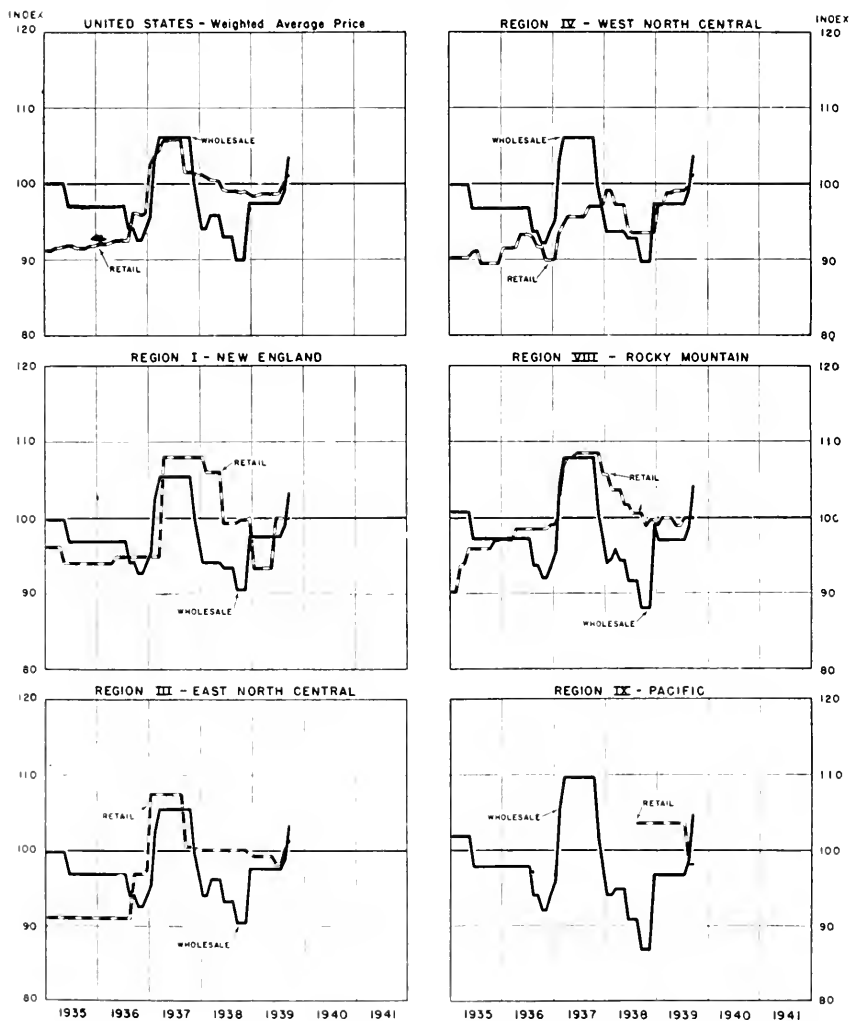
In retail markets the available data indicate that the regional trends are also similar and that they conform fairly closely to the

³ Blanket freight rate applies over most of the northern section of the United States east of the Mississippi River.

CHART XX

PONDEROSA PINE BOARDS WHOLESALE AND RETAIL PRICE INDEXES

JULY - SEPTEMBER 1939 = 100



general movement of wholesale. The trend was generally moderately upward from 1935 to the summer of 1936, but in the fall of 1936 and the first few months of 1937 prices advanced quite rapidly, aggregating 15 percent. In July 1937 a decline began which continued to the end of 1938 and totaled 8 percent.

TABLE 167.—*Ponderosa pine boards*

COMPOSITE UNITED STATES AVERAGE

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	100.2	91.3	June.....	106.2	105.8
February.....	100.2	91.3	July.....	106.2	105.8
March.....	100.2	91.7	August.....	106.2	105.8
April.....	100.2	91.7	September.....	106.2	101.6
May.....	100.2	91.8	October.....	106.2	101.6
June.....	97.2	91.9	November.....	100.2	101.6
July.....	97.2	91.9	December.....	97.2	101.0
August.....	97.2	91.6	1938		
September.....	97.1	91.6	January.....	94.1	101.3
October.....	97.1	91.6	February.....	94.1	100.9
November.....	97.1	91.8	March.....	95.8	100.6
December.....	97.1	91.8	April.....	95.8	100.6
1936			May.....	95.8	100.4
January.....	97.1	92.1	June.....	93.0	99.3
February.....	97.1	92.1	July.....	93.0	99.0
March.....	97.1	92.1	August.....	93.0	99.0
April.....	97.1	92.3	September.....	90.0	99.0
May.....	97.1	92.6	October.....	90.0	98.9
June.....	97.1	92.6	November.....	90.0	99.0
July.....	97.2	92.6	December.....	97.5	98.7
August.....	94.2	92.6	1939		
September.....	94.2	96.1	January.....	97.5	98.4
October.....	92.7	96.1	February.....	97.5	98.6
November.....	92.7	95.8	March.....	97.5	98.8
December.....	94.2	96.2	April.....	97.5	98.8
1937			May.....	97.5	98.7
January.....	95.7	102.6	June.....	97.5	98.7
February.....	103.2	103.6	July.....	97.5	98.8
March.....	106.2	104.3	August.....	99.0	100.1
April.....	106.2	105.7	September.....	103.5	101.1
May.....	106.2	105.7			

Specification: Pine, Ponderosa, boards, No. 3 common, 1 by 8 inches, random lengths, S2 or 4S; per M board feet.

Wholesale: Carlots, mill to retail yard, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 168.—*Ponderosa pine boards*

REGION I. NEW ENGLAND

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January	99.8	96.2	June	105.4	108.1
February	99.8	96.2	July	105.4	108.1
March	99.8	96.2	August	105.4	108.1
April	99.8	96.2	September	105.4	108.1
May	99.8	94.0	October	105.4	108.1
June	96.9	94.0	November	99.8	108.1
July	96.9	94.0	December	97.0	108.1
August	96.9	94.0	1938		
September	96.9	94.0	January	94.1	108.1
October	96.9	94.0	February	94.1	106.0
November	96.9	94.0	March	94.1	106.0
December	96.9	94.0	April	94.1	106.0
1936			May	94.1	106.0
January	96.9	94.0	June	93.4	99.4
February	96.9	94.0	July	93.4	99.4
March	96.9	94.0	August	93.4	99.4
April	96.9	94.0	September	90.6	99.4
May	96.9	94.9	October	90.6	99.8
June	96.9	94.9	November	90.6	99.8
July	96.9	94.9	December	97.6	100.0
August	94.1	94.9	1939		
September	94.1	94.9	January	97.6	93.4
October	92.7	94.9	February	97.6	93.4
November	92.7	94.9	March	97.6	93.4
December	94.1	94.9	April	97.6	93.4
1937			May	97.6	93.4
January	95.5	94.9	June	97.6	100.0
February	102.6	94.9	July	97.6	100.0
March	105.4	94.9	August	99.1	100.0
April	105.4	108.1	September	103.3	100.0
May	105.4	108.1			

Specification: Pine, Ponderosa, boards, No 3 common, 1 by 8 inches, random lengths, S2 or 4S; per M board feet.

Wholesale: Carlots, mill to retail yard, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 169.—*Ponderosa pine boards*

[Wholesale and retail price indexes—July–September 1939=100.0]

REGION III. EAST NORTH CENTRAL

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	99.8	91.0	June.....	105.5	107.6
February.....	99.8	91.0	July.....	105.5	107.6
March.....	99.8	91.0	August.....	105.5	107.6
April.....	99.8	91.0	September.....	105.5	100.6
May.....	99.8	91.0	October.....	105.5	100.6
June.....	96.9	91.0	November.....	99.8	100.6
July.....	96.9	91.0	December.....	96.9	100.1
August.....	96.9	91.0	1938		
September.....	96.9	91.0	January.....	94.0	100.1
October.....	96.9	91.0	February.....	94.0	100.1
November.....	96.9	91.0	March.....	96.2	100.1
December.....	96.9	91.0	April.....	96.2	100.1
1936			May.....	96.2	100.1
January.....	96.9	91.0	June.....	93.3	100.1
February.....	96.9	91.0	July.....	93.3	100.1
March.....	96.9	91.0	August.....	93.3	100.1
April.....	96.9	91.0	September.....	90.5	100.1
May.....	96.9	91.0	October.....	90.5	100.1
June.....	96.9	91.0	November.....	90.5	100.1
July.....	96.9	91.0	December.....	97.6	99.6
August.....	94.0	91.0	1939		
September.....	94.0	96.9	January.....	97.6	99.3
October.....	92.6	96.9	February.....	97.6	99.3
November.....	92.6	96.9	March.....	97.6	99.3
December.....	94.0	97.5	April.....	97.6	99.3
1937			May.....	97.6	99.3
January.....	95.5	107.6	June.....	97.6	98.3
February.....	102.6	107.6	July.....	97.6	98.3
March.....	105.5	107.6	August.....	99.0	100.3
April.....	105.5	107.6	September.....	103.3	101.4
May.....	105.5	107.6			

Specification: Pine, ponderosa, boards, No. 3 common, 1 by 8 inches, random lengths, S2 or 4S; per M board feet.

Wholesale: Carlots, mill to retail yard, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 170.—*Ponderosa pine boards*

[Wholesale and retail price indexes—July-September 1939=100.0]

REGION IV. WEST NORTH CENTRAL

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	99.9	90.3	June.....	106.0	95.6
February.....	99.9	90.3	July.....	106.0	95.6
March.....	99.9	90.3	August.....	106.0	95.6
April.....	99.9	90.3	September.....	106.0	97.0
May.....	99.9	90.3	October.....	106.0	97.0
June.....	96.8	90.9	November.....	99.9	97.0
July.....	96.8	91.1	December.....	96.8	97.0
August.....	96.8	89.5	1938		
September.....	96.8	89.5	January.....	93.7	99.2
October.....	96.8	89.5	February.....	93.7	99.2
November.....	96.8	89.5	March.....	93.7	97.3
December.....	96.8	89.5	April.....	93.7	97.3
1936			May.....	93.7	97.3
January.....	96.8	91.5	June.....	92.8	94.1
February.....	96.8	91.5	July.....	92.8	93.5
March.....	96.8	91.5	August.....	92.8	93.5
April.....	96.8	91.6	September.....	89.7	93.5
May.....	96.8	93.3	October.....	89.7	93.5
June.....	96.8	93.3	November.....	89.7	93.5
July.....	96.8	93.3	December.....	97.4	93.5
August.....	93.7	92.9	1939		
September.....	93.7	91.7	January.....	97.4	97.1
October.....	92.2	91.7	February.....	97.4	97.9
November.....	92.2	89.9	March.....	97.4	98.8
December.....	93.7	89.9	April.....	97.4	98.8
1937			May.....	97.4	99.1
January.....	95.2	90.0	June.....	97.4	99.1
February.....	102.9	93.4	July.....	97.4	99.1
March.....	106.0	94.7	August.....	99.0	99.7
April.....	106.0	95.6	September.....	103.6	101.2
May.....	106.0	95.6			

Specification: Pine, ponderosa, boards, No. 3 common, 1 by 8 inches, random lengths, S2 or 4S; per M board feet.

Wholesale: Carlots, mill to retail yard, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city

TABLE 171.—*Ponderosa pine boards*

REGION VIII. ROCKY MOUNTAIN

[Wholesale and retail price indexes—July–September 1939 = 100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	100.8	90.3	June.....	107.9	108.6
February.....	100.8	90.3	July.....	107.9	108.6
March.....	100.8	93.6	August.....	107.9	108.6
April.....	100.8	94.0	September.....	107.9	108.6
May.....	100.8	95.9	October.....	107.9	108.6
June.....	97.3	95.9	November.....	100.8	108.6
July.....	97.3	95.9	December.....	97.3	105.7
August.....	97.3	95.9	1938		
September.....	97.3	95.9	January.....	94.0	105.7
October.....	97.3	95.9	February.....	94.6	103.7
November.....	97.3	97.1	March.....	95.8	103.7
December.....	97.3	97.1	April.....	94.4	103.7
1936			May.....	94.4	101.7
January.....	97.3	97.2	June.....	91.7	101.7
February.....	97.3	97.2	July.....	91.7	100.6
March.....	97.3	97.0	August.....	91.7	100.6
April.....	97.3	98.6	September.....	88.2	100.6
May.....	97.3	98.6	October.....	88.2	99.0
June.....	97.3	98.6	November.....	88.2	99.8
July.....	97.3	98.6	December.....	97.1	99.8
August.....	93.7	98.6	1939		
September.....	93.7	98.6	January.....	97.1	99.0
October.....	92.0	98.6	February.....	97.1	100.0
November.....	92.0	98.6	March.....	97.1	100.0
December.....	93.7	99.2	April.....	97.1	100.0
1937			May.....	97.1	99.0
January.....	95.5	99.2	June.....	97.1	99.0
February.....	104.4	102.3	July.....	97.1	100.0
March.....	107.9	106.8	August.....	98.8	100.0
April.....	107.9	108.0	September.....	104.2	100.0
May.....	107.9	108.0			

Specification: Pine, ponderosa, boards, No. 3 common, 1 by 8 inches, random lengths, S2 or 4S; per M board feet.

Wholesale: Carlots, mill to retail yard, f. o. b., cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 172.—*Ponderosa pine boards*

REGION IX. PACIFIC

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January	101.9	102.2	June	109.7	96.9
February	101.9	102.2	July	109.7	96.9
March	101.9	102.2	August	109.7	96.9
April	101.9	102.2	September	109.7	96.9
May	101.9	102.2	October	109.7	96.9
June	97.9	102.2	November	101.9	96.9
July	97.9	102.2	December	97.9	96.9
August	97.9	102.2			
September	97.9	102.2	1938		
October	97.9	102.2	January	94.0	96.9
November	97.9	102.2	February	94.0	96.9
December	97.9	102.2	March	94.8	96.9
1936			April	94.8	96.9
January	97.9	102.2	May	94.8	96.9
February	97.9	102.2	June	90.8	96.9
March	97.9	102.2	July	90.8	96.9
April	97.9	102.2	August	90.8	103.6
May	97.9	102.2	September	86.9	103.6
June	97.9	102.2	October	86.9	103.6
July	97.9	102.2	November	86.8	103.6
August	94.0	102.2	December	96.7	103.6
September	94.0	102.2			
October	92.0	102.2	1939		
November	92.0	102.2	January	96.7	103.6
December	94.0	102.2	February	96.7	103.6
1937			March	96.7	103.6
January	95.9	96.9	April	96.7	103.6
February	105.3	96.9	May	96.7	103.6
March	109.7	96.9	June	96.7	103.6
April	109.7	96.9	July	96.7	103.6
May	109.7	96.9	August	98.7	98.2
			September	104.6	98.2

Specification: Pine, ponderosa, boards, No. 3 common, 1 by 8 inches, random lengths, S2 or 4S; per M board feet.

Wholesale: Carlots, mill to retail yard, f. o. b., cars destination.

Retail: Dealer to contractor, delivered to job site, city.

CHAPTER XVI

WHITE PINE

White pine production in the United States in 1937 ranked fourth among the softwoods and sixth for all types of lumber. The average mill value of white pine per unit was higher than for any of the other three softwoods which are more widely used—yellow pine, Douglas fir, and Ponderosa pine. The following summary shows the production and value of white pine for the years indicated: ¹

Year	Production		Year	Production	
	1,000 board feet	Average value at mill		1,000 board feet	Average value at mill
1927.....	1,344,466	\$29.90	1933.....	532,088	\$21.45
1929.....	1,247,878	29.87	1935.....	854,266	25.66
1931.....	715,504	24.71	1937.....	1,012,136	29.20

The production of white pine lumber is scattered over 26 States, located in the Northwest, North Central or Great Lakes States, Appalachian region, and New England. However, 82 percent of the total is produced in five States—New Hampshire and Maine in the Northeast, Minnesota in the North Central, and Washington and Idaho in the Northwest. Map IX shows the location of the leading producing States, and table 173 gives the production by States for 1937.

TABLE 173.—*Distribution of production of white pine in 1937*¹

State	Production		State	Production	
	1,000 board feet	Percent of total		1,000 board feet	Percent of total
Idaho.....	459,661	45.4	Michigan.....	21,491	2.1
Maine.....	113,059	11.2	Montana.....	20,186	2.0
New Hampshire.....	102,608	10.1	Vermont.....	14,898	1.5
Minnesota.....	79,119	7.8	New York.....	14,030	1.4
Washington.....	78,091	7.7	Pennsylvania.....	10,850	1.1
Massachusetts.....	39,818	3.9	Other States (14) ¹	29,908	3.0
Wisconsin.....	28,417	2.8			

¹ States producing less than 1 percent are Connecticut, Georgia, Iowa, Kentucky, Maryland, New Jersey, North Carolina, Ohio, Oregon, Rhode Island, Tennessee, Utah, Virginia, and West Virginia.

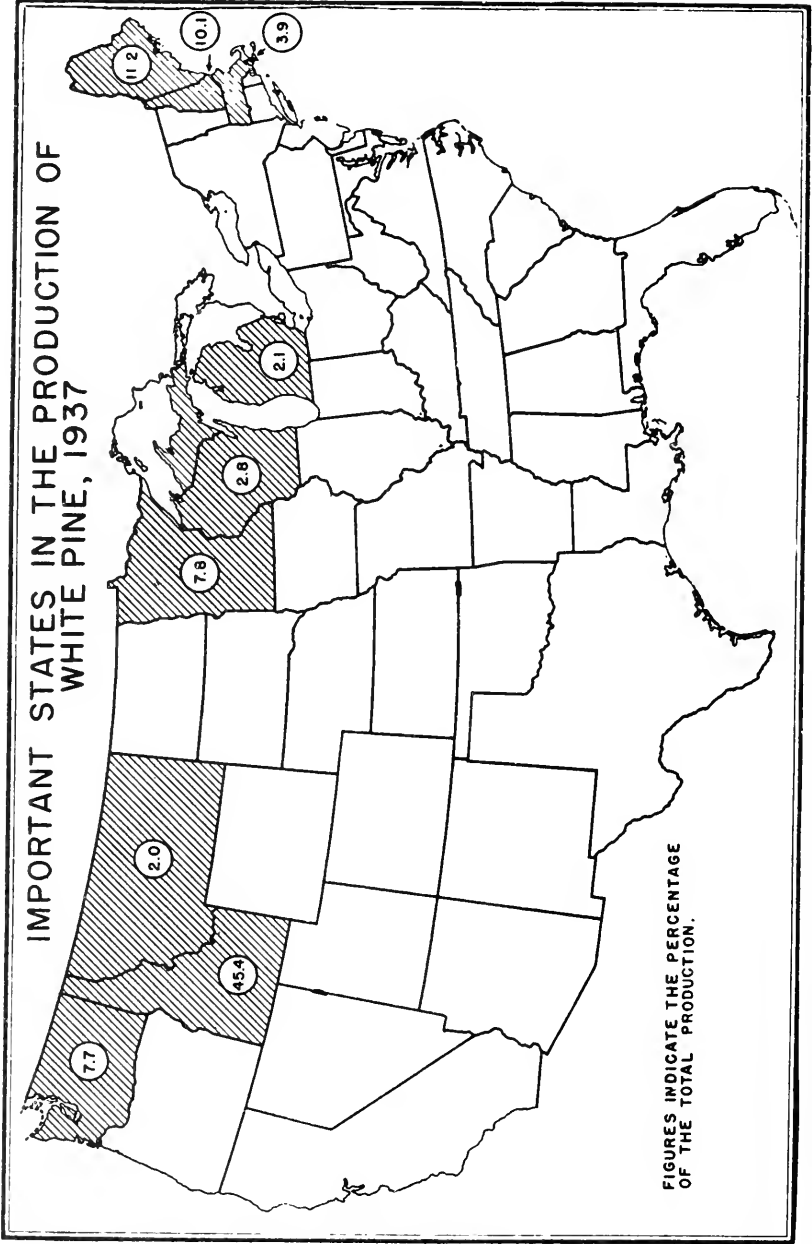
Source: Census of Manufactures, 1937: "Production of lumber by kind and by States," table 10, p. 515.

There are several species of white pine; the Census of Manufactures includes four species under this classification. The three most important are eastern white pine, which is cut in the Lake States, New England, and the Appalachian region; jack pine, which comes from the Lake States; and western or Idaho white pine, which is cut

¹ Census of Manufactures, 1937: "Lumber and timber products not elsewhere classified," table 7, pp. 499 ff.

MAP IX

IMPORTANT STATES IN THE PRODUCTION OF WHITE PINE, 1937



FIGURES INDICATE THE PERCENTAGE OF THE TOTAL PRODUCTION.

in the Northwest region. For the purposes of this survey, however, no distinction need be made between these species.

The item priced was boards, No. 3 common, 1 by 8 inches, standard lengths. Like the other softwoods in this survey, white pine is sold on an f. o. b. mill basis, subject to unsystematic freight equalization. Mill prices are varied so that the sum of mill prices plus freight will give destination prices that enable the producers to meet competition in each market.

Sales are made through brokers, commission men, and traveling salesmen, as well as directly from the mills. As in other lumber industries, brokers get 8 percent discount, commission men 4 percent, and the usual discount for cash is 2 percent.

White pine cannot compete with the lower priced yellow pine or Douglas fir in many sections of the country. Due to the scattered market for the commodity, price data obtained were insufficient for computing average regional prices. The average of prices obtained for a few scattered destinations in four Northern and Eastern regions was \$49 per thousand board feet, at retail. However, this cannot be considered a national average price.

The trend of prices follows the general trend for other lumber, that is, rising prices from the first of 1935 to 1938, with a recession beginning in the latter part of 1938 and leveling off in the summer of 1939.

CHAPTER XVII

DOORS

DESCRIPTION OF THE INDUSTRY

The value of doors produced in the United States is greater than that of any other single type of mill work. In 1937, the production of doors was valued at \$39,000,000, sash at \$20,000,000, and window and door frames at \$16,000,000, according to data published by the Census of Manufactures.¹ The following summary shows the value of doors produced in the years selected.

Year	Value of production	Year	Value of production
1927.....	\$57,971,624	1933.....	\$12,266,788
1929.....	59,315,987	1935.....	20,579,892
1931.....	25,370,490	1937.....	38,968,960

Doors are manufactured in 39 States, but 6 States account for 68 percent of the total. The leading States are not grouped in one area, but are in two widely separated regions. The 3 Pacific Coast States—Washington, Oregon, and California—produce 36 percent of the total, and three North Central States—Wisconsin, Iowa, and Illinois—32 percent. Map X shows the geographical distribution of the leading States, and table 174 gives production by States in 1937.

TABLE 174.—*Production of doors in 1937, by States*

State	Production		State	Production	
	Value	Percent		Value	Percent
Washington.....	\$9,013,841	23	Ohio.....	\$844,339	2
Iowa.....	5,053,525	13	Missouri.....	612,827	2
Wisconsin.....	5,010,231	13	Texas.....	597,389	2
California.....	2,911,690	5	New Jersey.....	530,972	1
Illinois.....	2,419,771	6	Minnesota.....	529,071	1
Oregon.....	1,968,033	5	Virginia.....	478,528	1
Pennsylvania.....	1,144,684	3	Massachusetts.....	418,082	1
New York.....	1,113,023	3	Other States (22) ¹		16

¹ States producing less than 1 percent are Alabama, Arizona, Arkansas, Colorado, Connecticut, Florida, Georgia, Idaho, Kentucky, Louisiana, Maine, Michigan, Montana, Nebraska, New Hampshire, North Carolina, South Carolina, South Dakota, Tennessee, Utah, Vermont, and West Virginia.

Source: Census of Manufactures, 1937: "Planing-mill products," table 6, Planing-mill products, by kind, quantity, and value, by States, p. 534.

Many small firms, as well as a number of large firms, are engaged in the manufacture of doors. No definite data are available at this time on concentration within the industry.

¹ Census of Manufactures, 1937: "Planing mill products," table 7, Door production, by kind, number, and value, for the United States, p. 536.

Doors are made from many kinds of wood, but pine and Douglas fir are the leading species used. In 1937 the Census of Manufactures gives the following information on production of doors:

Type and use	Production	
	Number	Value
General construction:		
Pine.....	\$3, 846, 077	\$12, 806, 467
Douglas fir.....	6, 468, 639	11, 259, 563
Hardwood.....	433, 040	3, 397, 626
Other.....	772, 031	3, 034, 432
Total.....	11, 519, 787	30, 498, 088
Garages.....	316, 521	3, 940, 737
Other.....	(1)	4, 530, 135
Aggregate value.....	(1)	38, 968, 960

¹ Not available.

Source: Census of Manufactures, 1937: "Planing-mill products," table 7, Doors—Production by kind, number, and value, p. 521.

Thus we have definite information on the use of only one type of wood—Douglas fir which leads in number and is a close second in value. The figure for pine may include many different types such as Ponderosa, jack pine, yellow pine, white pine, etc. However, Ponderosa is the leading type of pine used in millwork, and it is a safe assumption that the greater part of the pine used in doors is also that type. While the production of pine doors is far below Douglas fir doors in number, their value exceeds that of fir, partly because of specialty work in pine. However, prices of Ponderosa pine doors are usually higher than those for Douglas fir doors of similar design.

PRICE STRUCTURE ²

One type of door was priced as representative of price movements in the industry. On the advice of the firms contacted, the item selected as indicative of the trend of prices on all doors was No. 1, interior, 5 cross panels, solid stiles and rails, 2 feet 8 inches by 6 feet 8 inches by 1½ inches. Prices were obtained on doors of this description manufactured from both Douglas fir and Ponderosa pine. These two series are believed to portray accurately the trend of prices for the door industry.

List Prices.

Wholesale prices on doors are quoted on a discount basis from a standard price list used by each manufacturer. In September 1939 the basic list price on the fir door meeting the above specifications was \$7.85. The list price changes rarely and is purely nominal, while discounts are subject to more frequent changes. One manufacturer reports 17 changes in discounts from 1935 to 1939, inclusive. Discounts range from 75 to 85 percent off list.

Zone Differentials.

The manufacturers divide the country into zones for pricing purposes. Most manufacturers use a 17 zone plan, although one firm

² The price structure described below is representative of the general practice in that part of the industry which distributes stock millwork through jobbers and dealers (usually the large producers). Part of the production shown on table 174 is in plants whose general practice is not covered by this description. No information was obtained on specialty millwork.

reports 21 zones. Prices are quoted in mixed carlots, freight allowed in each zone. Doors are delivered in the mill zone, freight allowed, at the f. o. b. mill price. In the other zones, the delivered price is higher, the amount added ranging from about 10 to 70 cents per door, depending partly upon the distance from the plant. The zone differentials are not always the same, and do not all change at the same time. Table 175 shows the zone differentials of one large manufacturer on September 1, 1939, by cities, for fir doors.

TABLE 175.—*Zone differentials in wholesale prices of doors, September 1939*

Region and city	Amount added to mill zone price (cents)	Region and city	Amount added to mill zone price (cents)
Region I (New England):		Region V (South Atlantic)—Con.	
A. Portland, Maine.....	0.43	E. Richmond, Va.....	0.43
B. Manchester, N. H.....	.43	F. Charlotte, N. C.....	.51
C. Burlington, Vt.....	.43	G. Charleston, S. C.....	.55
D. Boston, Mass.....	.43	H. Atlanta, Ga.....	.47
E. Providence, R. I.....	.43	I. Miami, Fla.....	.63
F. Hartford, Conn.....	.43	Region VI (East South Central):	
Region II (Middle Atlantic):		A. Louisville, Ky.....	.39
A. New York, N. Y.....	.43	B. Memphis, Tenn.....	.24
B. Trenton, N. J.....	.43	C. Birmingham, Ala.....	.43
C. Philadelphia, Pa.....	.43	D. Jackson, Miss.....	.24
Region III (East North Central):		Region VII (West South Central):	
A. Cleveland, Ohio.....	.39	A. Little Rock, Ark.....	..
B. Detroit, Mich.....	.39	B. Oklahoma City, Okla.....	.24
C. Indianapolis, Ind.....	.35	C. Austin, Tex.....	.27
D. Chicago, Ill.....	.27	D. Houston, Tex.....	.27
E. Milwaukee, Wis.....	.27	E. New Orleans, La.....	.27
Region IV (West North Central):		Region VIII (Rocky Mountain):	
A. Minneapolis, Minn.....	.24	A. Butte, Mont.....	.16
B. Fargo, N. Dak.....	.20	B. Boise, Idaho.....	.16
C. Sioux Falls, S. Dak.....	.24	C. Cheyenne, Wyo.....	.20
D. Des Moines, Iowa.....	.27	D. Denver, Colo.....	.20
E. Omaha, Nebr.....	.24	E. Salt Lake City, Utah.....	.16
F. Wichita, Kans.....	.24	F. Reno, Nev.....	.16
G. St. Louis, Mo.....	.27	G. Phoenix, Ariz.....	.27
Region V (South Atlantic):		H. Albuquerque, N. Mex.....	.24
A. Wilmington, Del.....	.43	Region IX (Pacific):	
B. Baltimore, Md.....	.43	A. Seattle, Wash.....	(¹)
C. Washington, D. C.....	.43	B. Portland, Oreg.....	(¹)
D. Charleston, W. Va.....	.39	C. Los Angeles, Calif.....	.20

¹ Mill zone.

Doors are sold in mixed carlots from manufacturer to jobber who, in turn, sells in less-than-carlot quantities to the retail dealer. When a retailer has sufficient volume of sales, he may buy direct from the manufacturer.

Doors are invoiced to the buyer, f. o. b. shipping point, full freight allowed to destination. The invoice price is varied by destination, to allow the manufacturer approximately uniform realization prices. The buyer deducts the freight paid from the face of the invoice and remits the balance less the cash discount, if paying within the specified time limit.

Douglas fir doors are frequently sold in advance of production, as the members of the industry like a backlog of orders. When an advance in price occurs between the receipt of an order and the time of shipment, the doors are delivered at the price in effect at the time the order was given. If a drop in price occurs between the receipt of an order and the time of shipment, the purchaser is charged the new or low price. Thus the buyer is given protection against a price rise

and guaranteed the benefits of any price decline before receipt of shipment.

However, manufacturers try to discourage, insofar as possible, the excessive buying of large quantities of doors for future delivery to jobbers who might wish to place large orders in anticipation of future price increases. By the use of statistics on building permits³ in their locality, jobbers are able to anticipate contractor demand for 3 or 4 months in advance, as most of the demand for doors is for new building construction.

PRICE LEVELS AND TRENDS

Geographical Differences in Levels and Spreads.

As may be expected from the wholesale method of sales and distribution, the delivered price of doors increases with the distance from the source of supply. At wholesale, the delivered price for Douglas fir doors on September 15, 1939, was highest in the South Atlantic region and lowest in the Pacific area. In the South Atlantic States (where few fir doors are sold) typical prices varied from \$1.96 to \$2.20, and on the west coast the range was from \$1.57 to \$1.77.

At retail, the lowest typical prices were in the Pacific area, where the range was \$2.50 to \$3.04, and the highest average was in the West South Central region, where the range of typical prices was \$3.25 to \$4.85.⁴ The geographical differences in both series are shown in the following table:

Price range	Number of cities		Price range	Number of cities	
	Whole-sale	Retail		Whole-sale	Retail
\$1.50 to \$1.74	6	-----	\$3.25 to \$3.49	-----	10
\$1.75 to \$1.99	18	-----	\$3.50 to \$3.74	-----	3
\$2.00 to \$2.24	17	-----	\$3.75 to \$3.99	-----	8
\$2.25 to \$2.49	-----	-----	\$4.00 to \$4.24	-----	2
\$2.50 to \$2.74	-----	2	\$4.25 to \$4.49	-----	1
\$2.75 to \$2.99	-----	5	\$4.50 to \$4.74	-----	-----
\$3.00 to \$3.24	-----	8	\$4.75 to \$4.99	-----	2

The average of typical prices for the 41 cities from which data were obtained on doors, was \$3.43 for retail and \$1.90 for wholesale, or a difference between the two markets of 81 percent. The smallest differences were in the New England and Middle Atlantic regions. The largest differences between wholesale and retail prices were in the West South Central and West North Central areas.⁵

³ Bureau of Labor Statistics, Building Construction in Principal Cities of the United States.

⁴ The price data obtained on Ponderosa pine doors were insufficient for the computation of reliable regional averages. The available data indicate that prices of Ponderosa doors are higher than those for fir doors, by amounts varying from 50 cents to \$1 per door at both wholesale and retail. The spread between wholesale and retail was approximately the same as that for fir.

⁵ The difference between the wholesale and retail prices shown in the above table is not necessarily the dealers' actual gross margin. In the wholesale distribution of doors there are two important channels: From manufacturer to jobber, and from jobber to dealer who in turn sells to the contractor. On most building materials the wholesale price is from manufacturer to dealer and the retail price is from dealer to contractor. The wholesale door prices here reported are from manufacturer to jobber and no data are available as to the prices charged the dealer. Therefore, the margin shown is the percentage difference between the jobbers' price and the contractors' price, whereas for the other commodities it is the percentage difference between the dealers' price and the contractors' price. In most cases, therefore, the difference shown for doors represents the cost of handling, warehousing, delivery, and profits for both jobber and retailer.

The following summary shows the regional averages of typical city prices, wholesale and retail, for Douglas fir doors on September 15, 1939:

Region	Prices		Difference	
	Whole-sale	Retail	Amount	Percent
New England.....	\$2.00	\$3.18	\$1.18	59
Middle Atlantic.....	2.00	2.92	.92	46
East North Central.....	1.90	3.51	1.61	85
West North Central.....	1.81	3.77	1.96	108
South Atlantic.....	2.04	3.46	1.42	70
East South Central.....	1.91	3.45	1.54	81
West South Central.....	1.83	4.28	2.45	134
Rocky Mountain.....	1.76	3.53	1.77	101
Pacific.....	1.64	2.76	1.12	68
Average.....	1.90	3.43	1.53	81

Price Trends. (See chart XXI and tables 176 to 185.)

There have been rather wide fluctuations in wholesale prices of Douglas fir doors, on a Nation-wide basis, particularly during 1937 and 1938. During 1935, prices were fairly stable, advancing by about 6 percent in November of that year and declining again by about 4 percent in June of 1936. In the early part of 1937 prices began to advance very rapidly and for the months of August to November they were 18 percent above the level of late 1936. After industrial activity declined in late 1937 virtually all of this advance was lost. By April 1938 prices had again risen about 10 percent to a level that was maintained until October, when a renewed drop of about 15 percent brought them to a level slightly under that of 1935. Except for a slight rise of 4 percent in March 1939 and an equal decline in July of that year, prices remained fairly steady at that level.

Regional wholesale prices showed the same general trends as that for the country as a whole. Retail prices, however, did not follow wholesale price trends closely in several parts of the country. In general, they advanced in the North and East from the 1935 levels to highs in 1937, and by 1939 were still generally higher than in 1935. In the South, also in the West; retail prices were lower in 1939 than in 1935, having experienced a succession of advances and still greater declines at various times.

Thus, the national average price, which is relatively stable, as reflected in a range of about 6 percent in the Bureau's retail price index based on the third quarter of 1939=100, in reality conceals widely divergent regional price changes.

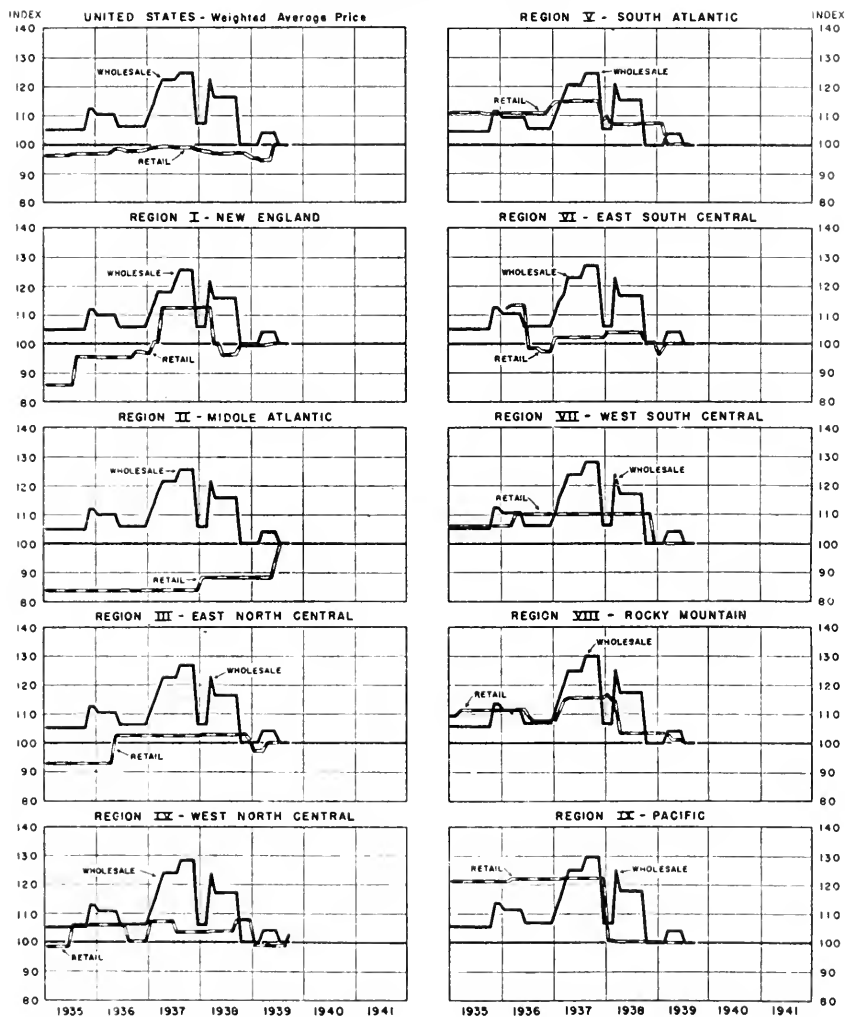
Retail prices for New England, which were at a comparatively low level in the first 7 months of 1935, rose about 12 percent in August of that year to a level that was maintained with only small changes until the early months of 1937 when there was a further 13 percent rise. Between March and June of 1938, a drop of 15 percent occurred, followed by a small rise to a level about 12 percent below the peak of 1937, with little change thereafter through September 1939.

In the Middle Atlantic area prices were unchanged from January 1935 through 1937. A 5 percent rise occurred in January 1938, followed by a further 14 percent rise in June 1939 to a level well above that which had prevailed in 1935-37.

CHART XXI

DOUGLAS FIR INTERIOR DOORS
WHOLESALE AND RETAIL PRICE INDEXES

JULY - SEPTEMBER 1939 = 100



In the East North Central area prices were relatively higher than in either of the other eastern areas until May 1936. They then rose 11 percent and remained stable at that level until the end of 1938, when there was a small decrease to the level which was maintained through September 1939.

In the West North Central area also, retail prices varied within a narrower range than in New England and the Middle Atlantic States. There were a series of advances and declines of about 4 to 8 percent. Increases occurred in July 1935, January 1937, September 1938, and September 1939. Price decreases were effective in August 1936, July 1937, and January 1939, as measured by the Bureau's index based on the third quarter of 1939=100. At no time between January 1935 and September 1937 were prices below 98 percent of the base level nor above 108 percent.

Throughout the Southern States, price trends were quite different. Prices declined in 1935-37 for the most part and by 1939, prevailing prices were generally substantially lower than in the earlier years, while in the North and East they were generally higher.

In the South Atlantic States, doors were selling at a higher level relative to 1939 prices than in other areas until the end of 1936. They rose 4 percent through November 1937, dropped 7 percent by February 1938, and fell another 7 percent in March 1939, contrary to trends in other parts of the country. In the East South Central area also, retail prices moved differently from those in the East and North. They dropped 14 percent in July 1936, regained 5 percent at the beginning of 1937, and showed only a slight increase until October 1938, when they again dropped about 4 percent. In the West South Central area, prices showed little change until April 1936, when the level rose 4 percent. Only one subsequent change was reported—a drop of 10 percent in December 1938, to a level some 6 percent below that prevailing in 1935. In the Rocky Mountain area prices were stable except for a 4 percent decrease in the summer of 1936, and an 8 percent increase in the spring of 1937. This level was maintained until the spring of 1938, when there was a drop of 11 percent, followed by a 3 percent decrease to the base price in the spring of 1939 to a level about 11 percent below that prevailing in 1935. On the Pacific coast, prices remained unchanged through 1935, 1936, and 1937, with a drop of approximately 20 percent in January 1938, followed by relatively little change for the remainder of the period.

TABLE 176.—*Douglas fir interior doors*

COMPOSITE UNITED STATES AVERAGE

[Wholesale and retail price indexes—July-September 1939=100.6]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	105.1	96.2	June.....	122.3	99.3
February.....	105.1	96.2	July.....	122.4	99.2
March.....	105.1	96.2	August.....	124.8	99.2
April.....	105.1	96.2	September.....	124.8	99.2
May.....	105.1	96.2	October.....	124.8	99.2
June.....	105.1	96.2	November.....	124.8	99.2
July.....	105.1	96.5	December.....	106.2	98.3
August.....	105.1	96.7	1938		
September.....	105.1	96.7	January.....	106.2	98.1
October.....	105.1	96.7	February.....	106.2	97.7
November.....	112.4	96.7	March.....	122.4	97.7
December.....	112.4	96.7	April.....	116.5	97.1
1936			May.....	116.5	97.1
January.....	110.3	96.7	June.....	116.5	97.0
February.....	110.3	96.7	July.....	116.5	97.0
March.....	110.3	96.8	August.....	116.5	97.0
April.....	110.3	97.1	September.....	116.5	97.2
May.....	110.3	98.5	October.....	100.0	97.2
June.....	106.2	98.5	November.....	100.0	97.2
July.....	106.2	98.1	December.....	100.0	96.3
August.....	106.2	97.9	1939		
September.....	106.2	97.9	January.....	100.0	95.3
October.....	106.2	97.9	February.....	100.0	95.4
November.....	106.2	97.9	March.....	104.1	94.5
December.....	106.2	98.1	April.....	104.1	94.8
1937			May.....	104.1	94.8
January.....	110.3	98.7	June.....	104.1	100.0
February.....	114.4	98.9	July.....	100.0	100.0
March.....	118.6	99.0	August.....	100.0	100.0
April.....	122.3	99.3	September.....	100.0	100.1
May.....	122.3	99.3			

Specification: Doors, Douglas fir, No. 1, interior, 5 cross panels, solid stiles and rails, 2 feet 8 inches by 6 feet 8 inches by 1 $\frac{3}{4}$ inches; each.

Wholesale: Carlots in mixed cars, manufacturer to jobber, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 177.—*Douglas fir interior doors*

REGION I. NEW ENGLAND

{Wholesale and retail price indexes—July–September 1939=100.0}

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January	105.0	85.5	June	118.0	112.6
February	105.0	85.5	July	121.5	112.6
March	105.0	85.5	August	125.5	112.6
April	105.0	85.5	September	125.5	112.6
May	105.0	85.5	October	125.5	112.6
June	105.0	85.5	November	125.5	112.6
July	105.0	85.5	December	106.0	112.6
August	105.0	95.5	1938		
September	105.0	95.5	January	106.0	112.9
October	105.0	95.5	February	106.0	112.9
November	112.0	95.5	March	121.5	112.9
December	112.0	95.5	April	116.0	100.0
1936			May	116.0	100.0
January	110.0	95.3	June	116.0	96.1
February	110.0	95.3	July	116.0	96.1
March	110.0	95.3	August	116.0	96.1
April	110.0	95.3	September	116.0	96.2
May	110.0	95.3	October	100.0	99.6
June	106.0	95.3	November	100.0	99.6
July	106.0	95.3	December	100.0	99.6
August	106.0	95.3	1939		
September	106.0	95.3	January	100.0	99.6
October	106.0	97.2	February	100.0	99.6
November	106.0	97.2	March	104.0	99.6
December	106.0	96.9	April	104.0	99.9
1937			May	104.0	99.9
January	110.0	96.7	June	104.0	100.0
February	114.0	100.2	July	100.0	100.0
March	118.0	100.2	August	100.0	100.0
April	118.0	112.6	September	100.0	100.0
May	118.0	112.6			

Specification: Doors, Douglas fir, No. 1, interior, 5 cross panels, solid stiles and rails, 2 feet 8 inches by 6 feet 8 inches by 13½ inches; each.

Wholesale: Carlots in mixed cars, manufacturer to jobber, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 178.—*Douglas fir interior doors*

REGION II. MIDDLE ATLANTIC

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January	105.0	83.8	June	121.5	83.8
February	105.0	83.8	July	121.5	83.8
March	105.0	83.8	August	125.5	83.8
April	105.0	83.8	September	125.5	83.8
May	105.0	83.8	October	125.5	83.8
June	105.0	83.8	November	125.5	83.8
July	105.0	83.8	December	106.0	83.8
August	105.0	83.8			
September	105.0	83.8	1938		
October	105.0	83.8	January	106.0	88.2
November	112.0	83.8	February	106.0	88.2
December	112.0	83.8	March	121.5	88.2
1936			April	116.0	88.2
January	110.0	83.8	May	116.0	88.2
February	110.0	83.8	June	116.0	88.2
March	110.0	83.8	July	116.0	88.2
April	110.0	83.8	August	116.0	88.2
May	110.0	83.8	September	116.0	88.2
June	106.0	83.8	October	100.0	88.2
July	106.0	83.8	November	100.0	88.2
August	106.0	83.8	December	100.0	88.2
September	106.0	83.8			
October	106.0	83.8	1939		
November	106.0	83.8	January	100.0	88.2
December	106.0	83.8	February	100.0	88.2
1937			March	104.0	88.2
January	110.0	83.8	April	104.0	88.2
February	111.0	83.8	May	104.0	88.2
March	111.0	83.8	June	104.0	100.0
April	121.5	83.8	July	100.0	100.0
May	121.5	83.8	August	100.0	100.0
			September	100.0	100.0

Specification: Doors, Douglas fir, No. 1, interior, 5 cross panels, solid stiles and rails, 2 feet 8 inches by 6 feet 8 inches by 1 $\frac{3}{8}$ inches; each.

Wholesale: Carlots in mixed cars, manufacturer to jobber, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 179.—*Douglas fir interior doors*

REGION III. EAST NORTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	105.3	92.7	June.....	122.6	102.5
February.....	105.3	92.7	July.....	122.6	102.5
March.....	105.3	92.7	August.....	126.8	102.5
April.....	105.3	92.7	September.....	126.8	102.5
May.....	105.3	92.7	October.....	126.8	102.5
June.....	105.3	92.7	November.....	126.8	102.5
July.....	105.3	92.7	December.....	106.4	102.5
August.....	105.3	92.7			
September.....	105.3	92.7	1938		
October.....	105.3	92.7	January.....	106.4	102.8
November.....	112.6	92.7	February.....	106.4	102.8
December.....	112.6	92.7	March.....	122.6	102.8
			April.....	116.6	102.8
1936			May.....	116.6	102.8
January.....	110.5	92.7	June.....	116.6	102.8
February.....	110.5	92.7	July.....	116.6	102.8
March.....	110.5	92.7	August.....	116.6	102.8
April.....	110.5	92.7	September.....	116.6	102.8
May.....	110.5	102.5	October.....	100.0	102.8
June.....	106.4	102.5	November.....	100.0	102.8
July.....	106.4	102.5	December.....	100.0	101.1
August.....	106.4	102.5			
September.....	106.4	102.5	1939		
October.....	106.4	102.5	January.....	100.0	97.4
November.....	106.4	102.5	February.....	100.0	97.4
December.....	106.4	102.5	March.....	104.2	97.4
			April.....	104.2	100.0
1937			May.....	104.2	100.0
January.....	110.5	102.5	June.....	104.2	100.0
February.....	114.7	102.5	July.....	100.0	100.0
March.....	118.9	102.5	August.....	100.0	100.0
April.....	122.6	102.5	September.....	100.0	100.0
May.....	122.6	102.5			

Specification: Doors, Douglas fir, No. 1, interior, 5 cross panels, solid stiles and rails, 2 feet 8 inches by 6 feet 8 inches by 1 $\frac{3}{4}$ inches; each.

Wholesale: Carlots in mixed cars, manufacturer to jobber, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 180.—*Douglas fir interior doors*

REGION IV. WEST NORTH CENTRAL

[Wholesale and retail price indexes—July-September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	105.2	98.5	June.....	123.8	107.6
February.....	105.2	98.5	July.....	123.8	103.6
March.....	105.2	98.5	August.....	128.2	103.6
April.....	105.2	98.5	September.....	128.2	103.6
May.....	105.2	98.5	October.....	128.2	103.6
June.....	105.2	98.5	November.....	128.2	103.6
July.....	105.2	106.1	December.....	106.3	103.6
August.....	105.2	106.1	1938		
September.....	105.2	106.1	January.....	106.3	103.6
October.....	105.2	106.1	February.....	106.3	103.6
November.....	112.8	106.1	March.....	123.8	103.8
December.....	112.8	106.1	April.....	117.2	103.8
1936			May.....	117.2	103.8
January.....	110.6	106.1	June.....	117.2	103.8
February.....	110.6	106.1	July.....	117.2	103.8
March.....	110.6	106.1	August.....	117.2	103.8
April.....	110.6	106.1	September.....	117.2	107.8
May.....	110.6	106.1	October.....	100.0	107.8
June.....	106.3	106.1	November.....	100.0	107.8
July.....	106.3	105.7	December.....	100.0	107.8
August.....	106.3	100.9	1939		
September.....	106.3	100.9	January.....	100.0	99.0
October.....	106.3	100.9	February.....	100.0	99.0
November.....	106.3	100.9	March.....	104.1	99.0
December.....	106.3	100.9	April.....	104.1	99.0
1937			May.....	104.1	98.7
January.....	110.6	107.3	June.....	104.1	98.7
February.....	115.0	107.3	July.....	100.0	98.7
March.....	119.4	107.3	August.....	100.0	98.7
April.....	123.8	107.3	September.....	100.0	102.6
May.....	123.8	107.3			

Specification: Doors, Douglas fir, No. 1, interior, 5 cross panels, solid stiles and rails, 2 feet 8 inches by 6 feet 8 inches by 1½ inches; each.

Wholesale: Carlots in mixed cars, manufacturer to jobber, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 181.—*Douglas fir interior doors*

REGION V. SOUTH ATLANTIC

[Wholesale and retail price indexes—July-September 1939=100.0]

Year and month	Index		Year and month	Index	
	Wholesale	Retail		Wholesale	Retail
1935			1937—Continued		
January.....	104.6	111.0	June.....	120.8	115.2
February.....	104.6	111.0	July.....	120.8	115.2
March.....	104.6	111.0	August.....	124.7	115.2
April.....	104.6	111.0	September.....	124.7	115.2
May.....	104.6	111.0	October.....	124.7	115.2
June.....	104.6	111.0	November.....	124.7	115.2
July.....	104.6	111.0	December.....	105.6	108.0
August.....	104.6	111.0			
September.....	104.6	110.5	1938		
October.....	104.6	110.5	January.....	105.6	110.0
November.....	111.5	110.5	February.....	105.6	107.1
December.....	111.5	110.5	March.....	120.8	107.1
			April.....	115.6	107.1
1936			May.....	115.6	107.1
January.....	109.5	111.0	June.....	115.6	107.1
February.....	109.5	111.0	July.....	115.6	107.1
March.....	109.5	111.0	August.....	115.6	107.1
April.....	109.5	111.0	September.....	115.6	107.5
May.....	109.5	111.0	October.....	100.0	107.5
June.....	109.5	111.0	November.....	100.0	107.5
July.....	105.6	111.0	December.....	100.0	107.5
August.....	105.6	111.0			
September.....	105.6	111.0	1939		
October.....	105.6	111.0	January.....	100.0	107.5
November.....	105.6	111.0	February.....	100.0	107.5
December.....	105.6	113.2	March.....	103.9	100.3
			April.....	103.9	100.3
1937			May.....	103.9	100.3
January.....	109.5	114.9	June.....	103.9	100.3
February.....	113.4	114.9	July.....	100.0	100.3
March.....	117.2	114.9	August.....	100.0	100.3
April.....	120.8	114.9	September.....	100.0	100.0
May.....	120.8	115.2			

Specification: Doors, Douglas fir, No. 1, interior, 5 cross panels, solid stiles and rails, 2 feet 8 inches by 6 feet 8 inches by 1 3/8 inches; each.

Wholesale: Carlots in mixed cars, manufacturer to jobber, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 182.—*Douglas fir interior doors*

REGION VI. EAST SOUTH CENTRAL

[Wholesale and retail price indexes—July-September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	105.3	-----	June.....	122.9	102.3
February.....	105.3	-----	July.....	122.9	102.3
March.....	105.3	-----	August.....	127.1	102.3
April.....	105.3	-----	September.....	127.1	102.3
May.....	105.3	-----	October.....	127.1	102.3
June.....	105.3	-----	November.....	127.1	102.3
July.....	105.3	-----	December.....	106.3	102.3
August.....	105.3	-----	1938		
September.....	105.3	-----	January.....	106.3	104.1
October.....	105.3	-----	February.....	106.3	104.1
November.....	112.6	-----	March.....	122.9	104.1
December.....	112.6	-----	April.....	116.8	104.1
1936			May.....	116.8	104.1
January.....	110.5	-----	June.....	116.8	104.1
February.....	110.5	125.6	July.....	116.8	104.1
March.....	110.5	113.4	August.....	116.8	104.1
April.....	110.5	113.4	September.....	116.8	104.1
May.....	110.5	113.4	October.....	100.0	100.7
June.....	106.3	113.4	November.....	100.0	100.7
July.....	106.3	98.6	December.....	100.0	100.7
August.....	106.3	98.6	1939		
September.....	106.3	98.6	January.....	100.0	96.3
October.....	106.3	97.4	February.....	100.0	100.0
November.....	106.3	97.4	March.....	104.2	100.0
December.....	106.3	97.4	April.....	104.2	100.0
1937			May.....	104.2	100.0
January.....	110.5	102.3	June.....	104.2	100.0
February.....	114.7	102.3	July.....	100.0	100.0
March.....	118.9	102.3	August.....	100.0	100.0
April.....	122.9	102.3	September.....	100.0	100.0
May.....	122.9	102.3			

Specification: Doors, Douglas fir, No. 1, interior, 5 cross panels, solid stiles and rails, 2 feet 8 inches by 6 feet 8 inches by 1 $\frac{3}{4}$ inches, each.

Wholesale: Carlots in mixed cars, manufacturer to jobber, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 183.—*Douglas fir interior doors*

REGION VII. WEST SOUTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	105.4	106.3	June.....	123.9	110.3
February.....	105.4	106.3	July.....	123.9	110.3
March.....	105.4	106.3	August.....	128.3	110.3
April.....	105.4	106.3	September.....	128.3	110.3
May.....	105.4	106.3	October.....	128.3	110.3
June.....	105.4	106.3	November.....	128.3	110.3
July.....	105.4	106.3	December.....	106.5	110.3
August.....	105.4	106.3	1938		
September.....	105.4	106.3	January.....	106.5	110.3
October.....	105.4	106.3	February.....	106.5	110.3
November.....	113.0	106.3	March.....	123.9	110.3
December.....	113.0	106.3	April.....	117.4	110.3
1936			May.....	117.4	110.3
January.....	110.8	106.3	June.....	117.4	110.3
February.....	110.8	106.3	July.....	117.4	110.3
March.....	110.8	106.3	August.....	117.4	110.3
April.....	110.8	110.3	September.....	117.4	110.3
May.....	110.8	110.3	October.....	160.0	110.3
June.....	106.5	110.3	November.....	100.0	110.3
July.....	106.5	110.3	December.....	100.0	100.0
August.....	106.5	110.3	1939		
September.....	106.5	110.3	January.....	100.0	100.0
October.....	106.5	110.3	February.....	100.0	100.0
November.....	106.5	110.3	March.....	104.3	100.0
December.....	106.5	110.3	April.....	104.3	100.0
1937			May.....	104.3	100.0
January.....	110.8	110.3	June.....	104.3	100.0
February.....	115.2	110.3	July.....	100.0	100.0
March.....	119.5	110.3	August.....	100.0	100.0
April.....	123.9	110.3	September.....	100.0	100.0
May.....	123.9	110.3			

Specification: Doors, Douglas fir, No. 1, interior, 5 cross panels, solid stiles and rails, 2 feet 8 inches by 6 feet 8 inches by 1 $\frac{3}{4}$ inches, each.

Wholesale: Carlots in mixed cars, manufacturer to jobber, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 184.—*Douglas fir interior doors*

REGION VIII. ROCKY MOUNTAIN

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole sale	Retail		Whole sale	Retail
1935			1937—Continued		
January.....	105.8	109.4	June.....	125.0	115.7
February.....	105.8	109.4	July.....	125.0	115.7
March.....	105.8	111.3	August.....	129.5	115.7
April.....	105.8	111.3	September.....	129.5	115.7
May.....	105.8	111.3	October.....	129.5	115.7
June.....	105.8	111.3	November.....	125.5	115.7
July.....	105.8	111.3	December.....	106.9	115.7
August.....	105.8	111.3	1938		
September.....	105.8	111.3	January.....	106.9	116.9
October.....	105.8	111.3	February.....	106.9	114.7
November.....	113.7	111.3	March.....	125.0	114.7
December.....	113.7	111.3	April.....	117.6	103.4
1936			May.....	117.6	103.4
January.....	111.4	111.3	June.....	117.6	103.4
February.....	111.4	111.3	July.....	117.6	103.4
March.....	111.4	110.8	August.....	117.6	103.4
April.....	111.4	111.7	September.....	117.6	103.4
May.....	111.4	111.7	October.....	100.0	103.4
June.....	106.9	111.7	November.....	100.0	103.4
July.....	106.9	109.2	December.....	100.0	103.4
August.....	106.9	109.2	1939		
September.....	106.9	107.9	January.....	100.0	103.4
October.....	106.9	107.9	February.....	100.0	103.4
November.....	106.9	107.9	March.....	104.2	103.4
December.....	106.9	107.9	April.....	104.2	101.0
1937			May.....	104.2	101.0
January.....	111.4	107.9	June.....	104.2	101.0
February.....	116.0	111.0	July.....	100.0	100.0
March.....	120.5	114.8	August.....	100.0	100.0
April.....	125.0	115.7	September.....	100.0	100.0
May.....	125.0	115.7			

Specification: Doors, Douglas fir, No. 1, interior, 5 cross panels, solid stiles and rails, 2 feet 8 inches by 6 feet 8 inches by 13s inches, each.

Wholesale: Carlots in mixed cars, manufacturer to jobber, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

TABLE 185.—*Douglas fir interior doors*

REGION IX. PACIFIC

[Wholesale and retail price indexes—July-September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	105.7	121.2	June.....	125.2	122.2
February.....	105.7	121.2	July.....	125.2	122.2
March.....	105.7	121.2	August.....	129.8	122.2
April.....	105.7	121.2	September.....	129.8	122.2
May.....	105.7	121.2	October.....	129.8	122.2
June.....	105.7	121.2	November.....	129.8	122.2
July.....	105.7	121.2	December.....	106.9	122.2
August.....	105.7	121.2	1938		
September.....	105.7	121.2	January.....	106.9	100.7
October.....	105.7	121.2	February.....	106.9	100.7
November.....	113.8	121.2	March.....	125.2	100.5
December.....	113.8	121.2	April.....	117.9	100.5
1936			May.....	117.9	100.5
January.....	111.5	121.2	June.....	117.9	100.5
February.....	111.5	121.2	July.....	117.9	100.5
March.....	111.5	122.0	August.....	117.9	100.5
April.....	111.5	122.0	September.....	117.9	100.5
May.....	111.5	122.0	October.....	100.0	100.5
June.....	106.9	122.0	November.....	100.0	100.5
July.....	106.9	122.0	December.....	100.0	100.5
August.....	106.9	122.0	1939		
September.....	106.9	122.0	January.....	100.0	100.5
October.....	106.9	122.0	February.....	100.0	100.5
November.....	106.9	122.0	March.....	104.1	100.0
December.....	106.9	122.0	April.....	104.1	100.0
1937			May.....	104.1	100.0
January.....	111.5	122.0	June.....	104.1	100.0
February.....	116.0	122.0	July.....	100.0	100.0
March.....	120.6	122.2	August.....	100.0	100.0
April.....	125.2	122.2	September.....	100.0	100.0
May.....	125.2	122.2			

Specification: Doors, Douglas fir, No. 1, interior, 5 cross panels, solid stiles and rails, 2 feet 8 inches by 6 feet 8 inches by 13½ inches; each.

Wholesale: Carlots in mixed cars, manufacturer to jobber, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

CHAPTER XVIII

WINDOWS

DESCRIPTION OF THE INDUSTRY

The value of window sash produced in 1937 was \$20,000,000, compared with \$25,000,000 in 1929. The following table gives production for the periods covered by the 1937 Census of Manufactures¹ from 1927 through 1937.

Year	Production			Year	Production		
	Number	Value	Unit value		Number	Value	Unit value
1927.....	39,838,753	\$29,765,614	\$0.75	1933.....	12,727,002	\$6,744,003	\$0.53
1929.....	29,125,304	25,282,048	.87	1935.....	20,058,955	12,021,045	.60
1931.....	18,724,569	10,646,325	.57	1937.....	31,174,707	20,459,001	.66

Window sash, as a rule, are produced in independent planing mills although the production of planing mills operated in conjunction with sawmills is valued at about \$1,000,000 per year.² Mills are scattered throughout the entire country, but nine States, in five principal areas, produce 70 percent of the national total. Map XI shows the location of the States leading in sash production by value of product. The States, in order of importance, are Iowa, California, Wisconsin, Illinois, Washington, New York, Texas, Louisiana, and Minnesota. The following table gives the 1937 production of sash, by States.

TABLE 186.—*The production of window sash, 1937*

State	Production		State	Production	
	Value	Percent of total		Value	Percent of total
Iowa.....	\$4,088,021	20.0	Texas.....	\$740,140	3.6
California.....	2,363,747	11.6	Louisiana.....	611,140	3.0
Wisconsin.....	2,225,198	10.9	Minnesota.....	546,230	2.7
Illinois.....	1,406,320	6.9	New Hampshire.....	424,810	2.1
Washington.....	1,392,645	6.8	Oregon.....	414,547	2.0
New York.....	912,731	4.5	Other States (37) ¹	5,333,272	25.9

¹ Each less than 2 percent.

Source: Census of Manufactures; Planing mill products, table 6, p. 534.

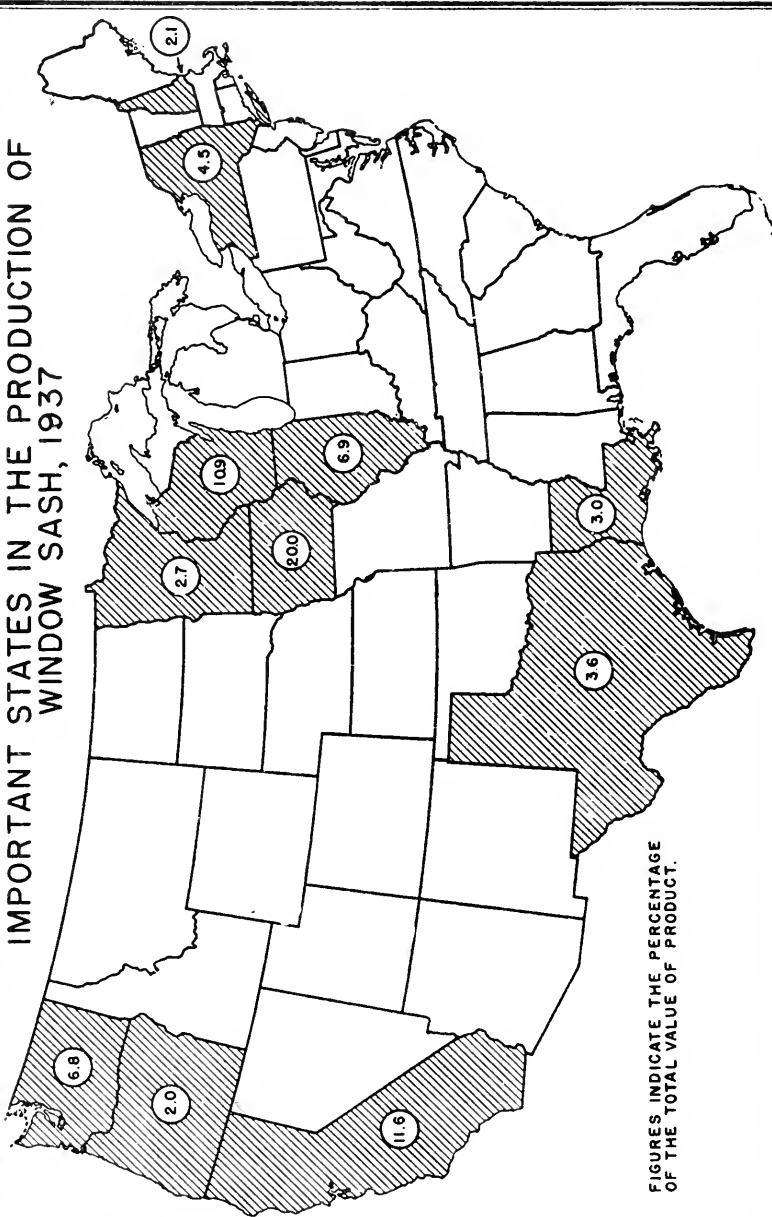
Various species of wood are used in the production of sash, but the more important are Ponderosa and white pine. Fir and sugar pine are used on the West Coast, while in the South, yellow pine is the

¹ Census of Manufactures, 1937: "Planing mill products," table 5, p. 533.

² Production data for windows are available only on open window sash (unglazed), while prices deal with the glazed or finished window. This difference in the data must be considered in interpreting this discussion.

MAP XI

IMPORTANT STATES IN THE PRODUCTION OF WINDOW SASH, 1937



FIGURES INDICATE THE PERCENTAGE OF THE TOTAL VALUE OF PRODUCT.

principal material. The type of wood used does not always depend upon the geographical location of producers, since the raw material is only a small factor in the value of the finished product. For example, one of the leading producers of Ponderosa pine millwork is located in Iowa, a State that produces no Ponderosa pine.

Many different types of sash are produced in the industry. Due to constant changes in residential designs, new types of sash are being constantly introduced and old types discontinued. Many companies manufacture to meet architects' specifications. However, there are certain standard types, the price trends of which should accurately reflect the trend of the industry as a whole. The one originally chosen for this survey was Ponderosa pine, No. 1, 2 light, check rail, open, 1½ inches thick, 24 by 24 inches glass size. Wholesale prices were obtained on this specification in a few cases, but in order to obtain adequate price series, it was necessary to substitute "glazed" for "open."

In certain cities, open sash are sold to contractors to be glazed at the job site.³ This practice prevails principally in those centers where the glaziers' union is strong and desires that glazing be done at the job site. As a rule, the small manufacturers install the glass at the factory and market glazed sash only. The few large manufacturers sell both glazed and unglazed sash. The distributor who buys the open sash usually installs the glass and sells the finished window to the retailer.

PRICE STRUCTURE

Channels of distribution for window sash are, in general, similar to those for doors and other millwork. The larger producers usually sell to jobbers who, in turn, distribute to dealers. Contractors are serviced by the dealers. The usual discounts allowed by the producers are 3 percent to commission men, and 2 percent for cash in 10 days or by the 10th proximo.

Large producers usually quote prices in mixed carlots, but small producers sell on a less-than-carlot basis. When delivery is made by truck, the minimum is frequently set at a truckload. Many producers quote prices effective on minima of 100 or 200 windows or openings.

Windows are usually sold on a delivered basis. Small mills, as a rule, limit their sales territory and quote identical delivered prices anywhere within such area.

The dealer, or retailer, sells the windows to the contractor, delivered to job site, in any quantity desired by the buyer.

PRICE LEVELS AND TRENDS

Geographical Variations.

The average of typical wholesale prices for glazed windows in 19 cities was \$1.53 and the average of retail prices was \$2.29. There is considerable variation among the cities. In September 1939 wholesale prices ranged from \$1.23 to \$1.82; the variation was even greater

³ Actually the glazing operation represents a larger proportion of the total cost of the window than that represented by the sash. It is reported that if a sash costs 50 cents, the window completely glazed runs \$1.25 to \$1.50.

in the retail prices which ranged from \$1.73 to \$2.80. The distribution follows:

Typical prices	Number of cities		Typical prices	Number of cities	
	Whole-sale	Retail		Whole-sale	Retail
\$1.20 to \$1.29	4	-----	\$2.10 to \$2.19	-----	3
\$1.30 to \$1.39	2	-----	\$2.20 to \$2.29	-----	2
\$1.40 to \$1.49	2	-----	\$2.30 to \$2.39	-----	2
\$1.50 to \$1.59	1	-----	\$2.40 to \$2.49	-----	4
\$1.60 to \$1.69	7	-----	\$2.50 to \$2.59	-----	1
\$1.70 to \$1.79	2	1	\$2.60 to \$2.69	-----	-----
\$1.80 to \$1.89	1	2	\$2.70 to \$2.79	-----	2
\$1.90 to \$1.99	-----	1	\$2.80 to \$2.89	-----	1
\$2.00 to \$2.09	-----	-----			

Price Trends. (See chart XXII and tables 187 to 196.)

The wholesale price of glazed windows for the United States has shown a general upward trend over the period from January 1935 to September 1939. The Bureau's index of window prices in January 1935 was 89, based on July-September 1939=100. A series of minor increases through 1935 and 1936 gave a net advance of 4 percent. In January 1937, a sharp increase of 6 percent initiated a rapid upswing that continued until September 1937, when prices leveled off for the remaining months of the year. The total rise during 1937 was 18 percent. During the first 8 months of 1938 prices declined steadily, losing some 8 percent, then remained relatively unchanged from late 1938 through September 1939.

The national average of retail prices in general followed the pattern established in the wholesale trend, except that the wide swings up in 1937 and down in 1938 were materially leveled out. Thus, while the wholesale increase in 1937 was 18 percent, the increase in retail prices was only 6 percent. The wholesale price decline in 1938 was about 10 percent, the retail 2 percent.

There were noticeable regional variations in the price behavior of windows. The pattern in the West North Central area closely followed that of the national composite. In the East North Central area retail prices shot up in 1937 and declined in 1938, experiencing a net gain of 34 percent. In the South Atlantic, East South Central, and Rocky Mountain areas, the spreads narrowed during the 5-year period. In the South Atlantic, wholesale prices showed a net gain of 1 percent during the period while retail prices declined 4 percent. In the East South Central, retail prices gained only 2 percent while wholesale prices advanced 20 percent. This is because the wholesale advance in 1936 and 1937 was reflected to a lesser degree on the retail side, while on the downswing retail prices fell farther. In the Rocky Mountain area there was a net fall of 11 percent in retail prices, while wholesale prices in 1939 were about the same as in 1935. Retail prices fell in 1936 and the rise in 1937 merely reflected a recovery. In 1938, retail prices fell 15 percent, while wholesale prices only dropped back to their previous levels.

CHART XXII

PONDEROSA PINE WINDOWS WHOLESALE AND RETAIL PRICE INDEXES

JULY - SEPTEMBER 1939 = 100

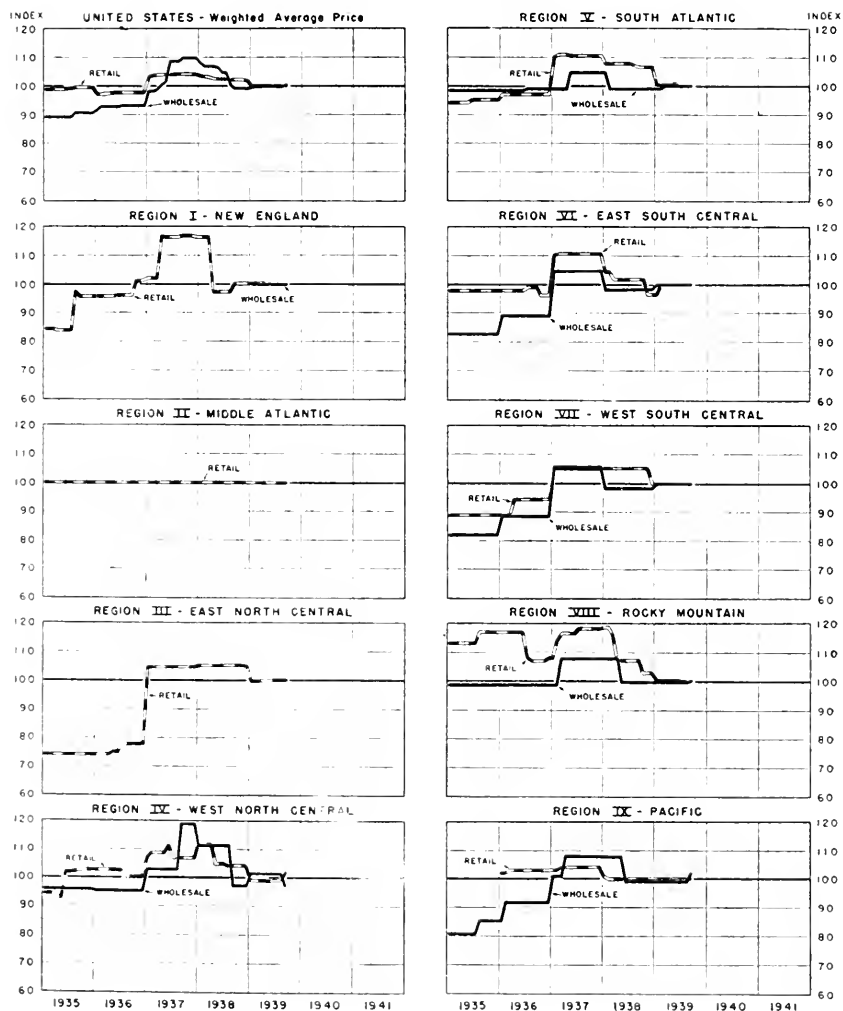


TABLE 187.—*Ponderosa pine windows*
COMPOSITE UNITED STATES AVERAGE

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index number		Year and month	Index number	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	89.2	98.8	June.....	108.6	104.3
February.....	89.2	98.8	July.....	108.6	104.1
March.....	89.2	98.8	August.....	108.6	104.1
April.....	89.2	98.7	September.....	109.8	104.2
May.....	89.2	98.7	October.....	109.8	104.2
June.....	89.2	99.2	November.....	109.8	104.2
July.....	89.2	99.2	December.....	109.8	104.1
August.....	90.6	99.6			
September.....	90.6	99.6	1938		
October.....	90.6	99.6	January.....	108.1	103.5
November.....	90.6	99.6	February.....	106.9	103.4
December.....	90.6	99.6	March.....	106.9	103.3
			April.....	106.9	102.7
1936			May.....	106.5	102.4
January.....	91.6	97.0	June.....	104.6	102.4
February.....	92.9	97.0	July.....	104.6	102.4
March.....	92.9	97.2	August.....	100.2	102.3
April.....	92.9	97.5	September.....	99.2	102.3
May.....	92.9	97.6	October.....	99.2	102.2
June.....	92.9	97.6	November.....	99.2	102.1
July.....	93.1	97.8	December.....	99.2	101.7
August.....	93.1	97.7			
September.....	93.1	97.7	1939		
October.....	93.1	97.8	January.....	99.7	99.9
November.....	93.1	97.8	February.....	99.7	100.0
December.....	93.1	97.8	March.....	99.9	100.0
			April.....	99.9	100.0
1937			May.....	99.9	100.0
January.....	98.3	103.4	June.....	99.9	100.0
February.....	98.3	103.7	July.....	99.9	100.0
March.....	98.8	103.9	August.....	99.9	100.0
April.....	100.2	104.2	September.....	100.2	100.1
May.....	101.5	104.2			

Specification: Windows, ponderosa pine, No. 1, 2 light, check rail, 1 $\frac{3}{4}$ inches thick, 24 by 24 inches, glass size, "western" opening.

Wholesale: Open, carlots in mixed cars, manufacturer to jobber, f. o. b. cars destination.

Retail: Glazed and/or open, dealer to contractor, delivered to job site, city.

TABLE 188.—*Ponderosa pine windows*

REGION I. NEW ENGLAND

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index number		Year and month	Index number	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....		84.6	June.....		116.6
February.....		84.6	July.....		116.6
March.....		84.6	August.....		116.6
April.....		84.0	September.....		117.1
May.....		84.0	October.....		117.1
June.....		84.0	November.....		117.1
July.....		84.0	December.....		116.6
August.....		97.5			
September.....		95.7	1938		
October.....		95.7	January.....		116.6
November.....		95.7	February.....		116.6
December.....		95.7	March.....		116.6
1936			April.....		97.4
January.....		95.7	May.....		97.4
February.....		95.7	June.....		97.4
March.....		95.7	July.....		97.4
April.....		95.7	August.....		97.4
May.....		95.8	September.....		100.3
June.....		96.2	October.....		100.3
July.....		96.2	November.....		100.3
August.....		96.2	December.....		100.3
September.....		96.2			
October.....		101.1	1939		
November.....		101.1	January.....	100.0	100.3
December.....		101.6	February.....	100.0	100.3
1937			March.....	100.0	100.3
January.....		102.0	April.....	100.0	100.3
February.....		102.0	May.....	100.0	100.0
March.....		102.0	June.....	100.0	100.0
April.....		116.8	July.....	100.0	100.0
May.....		116.6	August.....	100.0	100.0
			September.....	100.0	100.0

Specification: Windows, ponderosa pine, No. 1, 2 light, check rail, 1½ inches thick, 24 by 24 inches, glass size, "western" opening.

Wholesale: Open, carlots in mixed cars, manufacturer to jobber, f. o. b. cars destination.

Retail: Glazed and/or open, dealer to contractor, delivered to job site, city.

TABLE 189.—*Ponderosa pine windows*

REGION II. MIDDLE ATLANTIC

[Retail price index—July–September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	100.0	September.....	100.0	March.....	100.0
February.....	100.0	October.....	100.0	April.....	100.0
March.....	100.0	November.....	100.0	May.....	100.0
April.....	100.0	December.....	100.0	June.....	100.0
May.....	100.0	1937		July.....	100.0
June.....	100.0	January.....	100.0	August.....	100.0
July.....	100.0	February.....	100.0	September.....	100.0
August.....	100.0	March.....	100.0	October.....	100.0
September.....	100.0	April.....	100.0	November.....	100.0
October.....	100.0	May.....	100.0	December.....	100.0
November.....	100.0	June.....	100.0	1939	
December.....	100.0	July.....	100.0	January.....	100.0
1936		August.....	100.0	February.....	100.0
January.....	100.0	September.....	100.0	March.....	100.0
February.....	100.0	October.....	100.0	April.....	100.0
March.....	100.0	November.....	100.0	May.....	100.0
April.....	100.0	December.....	100.0	June.....	100.0
May.....	100.0	1938		July.....	100.0
June.....	100.0	January.....	100.0	August.....	100.0
July.....	100.0	February.....	100.0	September.....	100.0
August.....	100.0				

Specification: Windows, ponderosa pine, No. 1, 2 light, check rail, 1½ inches thick, 24 by 24 inches, glass size, "western" opening.

Retail: Glazed and/or open, dealer to contractor, delivered to job site, city.

TABLE 190.—*Ponderosa pine windows*

REGION III. EAST NORTH CENTRAL

[Retail price index—July–September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	74.2	September.....	77.9	March.....	105.2
February.....	74.2	October.....	77.9	April.....	105.2
March.....	74.2	November.....	77.9	May.....	105.2
April.....	74.2	December.....	77.9	June.....	105.2
May.....	74.2	1937		July.....	105.2
June.....	74.2	January.....	104.5	August.....	105.2
July.....	74.2	February.....	104.5	September.....	105.2
August.....	74.2	March.....	104.5	October.....	105.2
September.....	74.2	April.....	104.5	November.....	105.2
October.....	74.2	May.....	104.5	December.....	104.9
November.....	74.2	June.....	104.5	1939	
December.....	74.2	July.....	104.5	January.....	99.7
1936		August.....	104.5	February.....	99.7
January.....	74.2	September.....	104.5	March.....	99.7
February.....	74.2	October.....	104.5	April.....	100.0
March.....	74.2	November.....	104.5	May.....	100.0
April.....	74.2	December.....	104.5	June.....	100.0
May.....	75.0	1938		July.....	100.0
June.....	75.0	January.....	105.2	August.....	100.0
July.....	77.9	February.....	105.2	September.....	100.0
August.....	77.9				

Specification: Windows, ponderosa pine, No. 1, 2 light, check rail, 1½ inches thick, 24 by 24 inches, glass size, "western" opening.

Retail: Glazed and/or open, dealer to contractor, delivered to job site, city.

TABLE 191.—*Ponderosa pine windows*

REGION IV. WEST NORTH CENTRAL

[Wholesale and retail price indexes—July–September 1939 = 100.0]

Year and month	Index numbers		Year and month	Index numbers	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	95.7	94.4	June.....	102.9	111.3
February.....	95.7	94.4	July.....	102.9	106.7
March.....	95.7	94.4	August.....	102.9	106.7
April.....	95.7	92.8	September.....	118.9	106.7
May.....	95.7	92.8	October.....	118.9	106.7
June.....	95.7	101.7	November.....	118.9	106.7
July.....	95.7	101.8	December.....	118.9	106.7
August.....	95.7	101.8	1938		
September.....	95.7	102.6	January.....	111.3	111.3
October.....	95.7	102.6	February.....	111.3	111.3
November.....	95.7	102.6	March.....	111.3	111.6
December.....	95.7	102.6	April.....	111.3	111.6
1936			May.....	111.3	104.8
January.....	95.4	102.6	June.....	111.3	104.8
February.....	95.4	102.6	July.....	111.3	104.8
March.....	95.4	102.6	August.....	111.3	104.2
April.....	95.4	102.6	September.....	97.1	104.2
May.....	95.4	102.6	October.....	97.1	104.2
June.....	95.4	102.6	November.....	97.1	104.2
July.....	95.4	102.5	December.....	97.1	104.2
August.....	95.4	100.2	1939		
September.....	95.4	100.2	January.....	101.4	99.1
October.....	95.4	100.2	February.....	101.4	99.1
November.....	95.4	100.2	March.....	101.4	99.1
December.....	95.4	100.2	April.....	101.4	99.1
1937			May.....	101.4	99.0
January.....	102.9	107.0	June.....	101.4	99.0
February.....	102.9	108.7	July.....	101.4	99.0
March.....	102.9	108.7	August.....	101.4	99.0
April.....	102.9	108.7	September.....	97.3	101.9
May.....	102.9	108.7			

Specification: Windows, ponderosa pine, No. 1, 2 light, check rail, 1½ inches thick, 24 by 24 inches, glass size, "western" opening.

Wholesale: Open, carlots in mixed cars, manufacturer to jobber, f. o. b. cars destination.

Retail: Glazed and/or open, dealer to contractor, delivered to job site, city.

TABLE 192.—*Ponderosa pine windows*

REGION V. SOUTH ATLANTIC

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index numbers		Year and month	Index numbers	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	98.5	104.3	June.....	104.7	110.6
February.....	98.5	104.3	July.....	104.7	110.6
March.....	98.5	104.3	August.....	104.7	110.6
April.....	98.5	104.3	September.....	104.7	110.6
May.....	98.5	104.3	October.....	104.7	110.6
June.....	98.5	105.2	November.....	104.7	110.6
July.....	98.5	105.2	December.....	104.7	110.6
August.....	98.5	105.2	1938		
September.....	98.5	105.2	January.....	104.7	107.8
October.....	98.5	105.2	February.....	99.3	107.8
November.....	98.5	105.2	March.....	99.3	107.8
December.....	98.5	105.2	April.....	99.3	107.8
1936			May.....	99.3	107.8
January.....	98.5	107.2	June.....	99.3	107.8
February.....	98.5	107.2	July.....	99.3	107.8
March.....	98.5	107.2	August.....	99.3	106.9
April.....	98.5	107.2	September.....	99.3	106.6
May.....	98.5	107.2	October.....	99.3	106.6
June.....	98.5	107.2	November.....	99.3	106.6
July.....	99.1	107.2	December.....	99.3	106.6
August.....	99.1	107.2	1939		
September.....	99.1	107.2	January.....	99.3	100.3
October.....	99.1	107.2	February.....	99.3	100.3
November.....	99.1	107.2	March.....	100.0	100.3
December.....	99.1	107.2	April.....	100.0	100.3
1937			May.....	100.0	100.3
January.....	99.1	110.1	June.....	100.0	100.3
February.....	99.1	111.0	July.....	100.0	100.0
March.....	99.1	111.0	August.....	100.0	100.0
April.....	99.1	111.0	September.....	100.0	100.0
May.....	104.7	110.6			

Specification: Windows, ponderosa pine, No. 1, 2 light, check rail, 1½ inches thick, 24 by 24 inches, glass size, "western" opening.

Wholesale: Open, carlots in mixed cars, manufacturer to jobber, f. o. b. cars destination.

Retail: Glazed and/or open, dealer to contractor, delivered to job site, city.

TABLE 193.—*Ponderosa pine windows*

REGION VI. EAST SOUTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index numbers		Year and month	Index numbers	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	82.8	98.0	June.....	104.7	110.7
February.....	82.8	98.0	July.....	104.7	110.7
March.....	82.8	98.0	August.....	104.7	110.7
April.....	82.8	98.0	September.....	104.7	110.7
May.....	82.8	98.0	October.....	104.7	110.7
June.....	82.8	98.0	November.....	104.7	110.7
July.....	82.8	98.0	December.....	104.7	110.7
August.....	82.8	98.0			
September.....	82.8	98.0	1938		
October.....	82.8	98.0	January.....	98.4	104.5
November.....	82.8	98.0	February.....	98.4	104.5
December.....	82.8	98.0	March.....	98.4	101.9
			April.....	98.4	101.9
1936			May.....	98.4	101.9
January.....	89.1	98.0	June.....	98.4	101.9
February.....	89.1	98.0	July.....	98.4	101.9
March.....	89.1	98.0	August.....	98.4	101.9
April.....	89.1	98.0	September.....	98.4	101.9
May.....	89.1	98.0	October.....	98.4	101.9
June.....	89.1	98.0	November.....	98.4	96.6
July.....	89.1	99.2	December.....	98.4	96.6
August.....	89.1	99.2			
September.....	89.1	99.2	1939		
October.....	89.1	96.2	January.....	100.0	96.6
November.....	89.1	96.2	February.....	100.0	100.0
December.....	89.1	96.2	March.....	100.0	100.0
			April.....	100.0	100.0
1937			May.....	100.0	100.0
January.....	104.7	110.3	June.....	100.0	100.0
February.....	104.7	110.7	July.....	100.0	100.0
March.....	104.7	110.7	August.....	100.0	100.0
April.....	104.7	110.7	September.....	100.0	100.0
May.....	104.7	110.7			

Specification: Windows, ponderosa pine, No.1, 2 light, check rail, 1½ inches thick, 24 by 24 inches, glass size, "western" opening.

Wholesale: Open, carlots in mixed cars, manufacturer to jobber, f. o. b. cars destination.

Retail: Glazed and/or open, dealer to contractor, delivered to job site, city.

TABLE 194.—*Ponderosa pine windows*

REGION VII. WEST SOUTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index numbers		Year and month	Index numbers	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	82.1	88.9	June.....	105.7	105.4
February.....	82.1	88.9	July.....	105.7	105.4
March.....	82.1	88.9	August.....	105.7	105.4
April.....	82.1	88.9	September.....	105.7	105.4
May.....	82.1	88.9	October.....	105.7	105.4
June.....	82.1	88.9	November.....	105.7	105.4
July.....	82.1	88.9	December.....	105.7	105.4
August.....	82.1	88.9	1938		
September.....	82.1	88.9	January.....	98.4	105.4
October.....	82.1	88.9	February.....	98.4	105.3
November.....	82.1	88.9	March.....	98.4	105.3
December.....	82.1	88.9	April.....	98.4	105.3
1936			May.....	98.4	105.3
January.....	88.6	88.9	June.....	98.4	105.3
February.....	88.6	88.9	July.....	98.4	105.3
March.....	88.6	88.9	August.....	98.4	105.3
April.....	88.6	94.4	September.....	98.4	105.3
May.....	88.6	94.4	October.....	98.4	105.3
June.....	88.6	94.4	November.....	98.4	105.3
July.....	88.6	94.4	December.....	98.4	100.0
August.....	88.6	94.4	1939		
September.....	88.6	94.4	January.....	100.0	100.0
October.....	88.6	94.4	February.....	100.0	100.0
November.....	88.6	94.4	March.....	100.0	100.0
December.....	88.6	94.4	April.....	100.0	100.0
1937			May.....	100.0	100.0
January.....	105.7	105.4	June.....	100.0	100.0
February.....	105.7	105.4	July.....	100.0	100.0
March.....	105.7	105.4	August.....	100.0	100.0
April.....	105.7	105.4	September.....	100.0	100.0
May.....	105.7	105.4			

Specification: Windows, ponderosa pine, No. 1, 2 light, check rail, 1½ inches thick, 24 by 24 inches, glass size, "western" opening.

Wholesale: Open, carlots in mixed cars, manufacturer to jobber. f. o. b. cars destination.

Retail: Glazed and/or open, dealer to contractor, delivered to job site, city.

TABLE 195.—*Ponderosa pine windows*

REGION VIII. ROCKY MOUNTAIN

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	98.8	113.1	June.....	107.8	116.8
February.....	98.8	113.1	July.....	107.8	118.3
March.....	98.8	113.1	August.....	107.8	118.3
April.....	98.8	113.1	September.....	107.8	118.3
May.....	98.8	113.1	October.....	107.8	118.3
June.....	98.8	113.1	November.....	107.8	118.3
July.....	98.8	113.1	December.....	107.8	118.3
August.....	98.8	117.3	1938		
September.....	98.8	117.3	January.....	107.8	118.7
October.....	98.8	117.3	February.....	107.8	118.7
November.....	98.8	117.3	March.....	107.8	116.2
December.....	98.8	117.3	April.....	107.8	107.7
1936			May.....	99.8	107.2
January.....	98.8	117.3	June.....	99.8	107.2
February.....	98.8	117.3	July.....	99.8	107.2
March.....	98.8	117.3	August.....	99.8	107.2
April.....	98.8	117.3	September.....	99.8	107.2
May.....	98.8	117.3	October.....	99.8	103.0
June.....	98.8	117.3	November.....	99.8	103.0
July.....	98.8	108.0	December.....	99.8	103.0
August.....	98.8	106.9	1939		
September.....	98.8	106.9	January.....	99.8	100.5
October.....	98.8	106.9	February.....	99.8	100.5
November.....	98.8	106.9	March.....	99.8	100.5
December.....	98.8	108.0	April.....	99.8	100.5
1937			May.....	99.8	100.5
January.....	98.8	108.0	June.....	99.8	100.5
February.....	98.8	114.2	July.....	99.8	100.0
March.....	107.8	116.8	August.....	99.8	100.0
April.....	107.8	116.8	September.....	100.2	100.0
May.....	107.8	116.8			

Specification: Windows, ponderosa pine, No. 1, 2 light, check rail, $\frac{1}{8}$ inches thick, 24 by 24 inches, glass size, "western" opening.

Wholesale: Open, carlots in mixed cars, manufacturer to jobber, f. o. b. cars destination.

Retail: Glazed and/or open, dealer to contractor, delivered to job site, city.

TABLE 196.—*Ponderosa pine windows*

REGION IX, PACIFIC

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	80.8	-----	June.....	107.8	104.2
February.....	80.8	-----	July.....	107.8	104.2
March.....	80.8	-----	August.....	107.8	104.2
April.....	80.8	-----	September.....	107.8	104.2
May.....	80.8	-----	October.....	107.8	104.2
June.....	80.8	-----	November.....	107.8	104.2
July.....	80.8	-----	December.....	107.8	104.2
August.....	85.3	-----	1938		
September.....	85.3	-----	January.....	107.8	100.8
October.....	85.3	-----	February.....	107.8	100.0
November.....	85.3	-----	March.....	107.8	100.0
December.....	85.3	-----	April.....	107.8	100.0
1936			May.....	107.8	100.0
January.....	85.3	102.0	June.....	99.0	100.0
February.....	91.6	102.0	July.....	99.0	100.0
March.....	91.6	103.1	August.....	99.0	100.0
April.....	91.6	103.1	September.....	99.0	100.0
May.....	91.6	103.1	October.....	99.0	100.0
June.....	91.6	103.1	November.....	99.0	100.0
July.....	91.6	103.1	December.....	99.0	100.0
August.....	91.6	103.1	1939		
September.....	91.6	103.1	January.....	99.0	100.0
October.....	91.6	103.1	February.....	99.0	100.0
November.....	91.6	103.1	March.....	99.0	100.0
December.....	91.6	103.1	April.....	99.0	100.0
1937			May.....	99.0	100.0
January.....	100.9	103.1	June.....	99.0	100.0
February.....	100.9	103.1	July.....	99.0	100.0
March.....	100.9	104.2	August.....	99.0	100.0
April.....	107.8	104.2	September.....	101.9	100.0
May.....	107.8	104.2			

Specification: Windows, ponderosa pine, No. 1, 2 light, check rail, 1½ inches thick, 24 by 24 inches, glass size, "western" opening.

Wholesale: Open, carlots in mixed cars, manufacturer to jobber, f. o. b. cars destination.

Retail: Glazed and/or open, dealer to contractor, delivered to job site, city.

CHAPTER XIX

HEATING EQUIPMENT

Representative specifications were determined for the following items of plumbing and heating equipment used in residential building: heating boiler, radiation, water closet, lavatory, bath tub, sink, and range boiler.

Although plumbing and heating equipment are often grouped for purposes of discussion, they are in fact produced by a number of distinct industries. Plants producing heating boilers also manufacture radiation; plants making plumbing may or may not produce heating equipment. The large manufacturers of heating and plumbing equipment do not ordinarily produce range boilers. However, the larger firms often stock range boilers, buying from the smaller producers and selling to jobbers. In this report, each principal group of products is discussed separately.

HEATING BOILERS AND RADIATION

DESCRIPTION OF THE INDUSTRY

The value of product in 1937 was approximately \$15,975,000 for cast-iron steam and hot-water heating boilers and \$14,750,000 for cast-iron radiation. Cast-iron boilers represented 59.7 percent of all boilers produced and 3.6 percent of all heating and cooking apparatus (except electric), while cast-iron radiation was 86.3 percent of all radiation produced and 3.3 percent of all heating and cooking apparatus (except electric). No information is available on the value of product by States.

TABLE 197.—*Geographical distribution of production of heating and cooking apparatus, except electric, 1937*

State	Production	
	Value	Percent of total
Illinois.....	\$96,500,000	22.0
Ohio.....	66,500,000	15.1
Michigan.....	40,400,000	9.2
Pennsylvania.....	37,400,000	8.5
New York.....	25,400,000	5.8
Massachusetts.....	23,300,000	5.3
Wisconsin.....	21,200,000	4.8
California.....	20,500,000	4.7
Other States (27) ¹	108,100,000	24.6
Total value United States	439,300,000	100.0

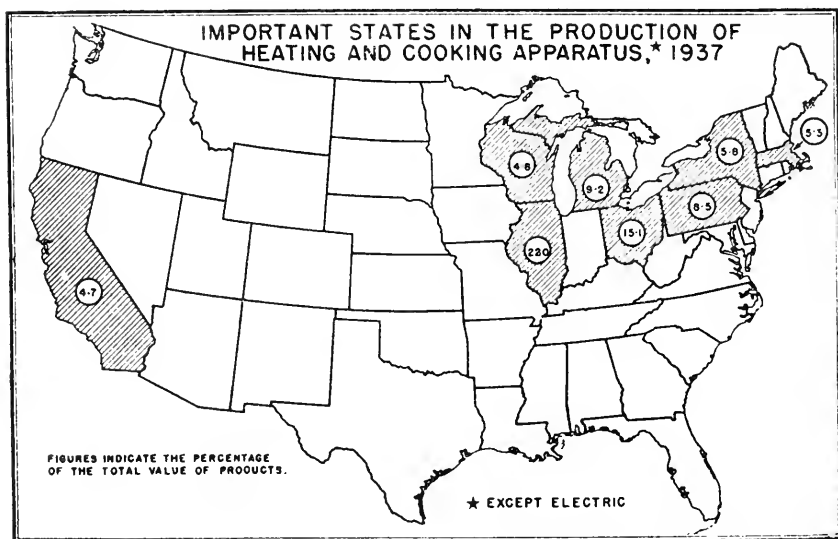
¹ Total number of producing States is 35.

Source: Census of Manufactures, 1937, p. 944.

According to the Census of Manufactures, 830 establishments were engaged in the manufacture of heating and cooking apparatus (except electric) in 1937, but the number of establishments engaged in producing heating boilers and radiation as distinguished from other heating and cooking apparatus is not available. Seventy-five percent of the industry as a whole is concentrated in 8 States, all of which, except California, are in the area east of the Mississippi River and north of the Ohio River. (See map XII.)

Although heating apparatus is produced by a considerable number of companies, production of boilers and radiation is fairly well concentrated. According to the Department of Commerce, during 1937 54.9 percent of the value of heating boilers, and 61.0 percent of the value of radiation, was produced by the four largest companies in the industry.

MAP XII



Specifications.

The boiler selected for pricing in this study was a hand-fired heating boiler for anthracite and bituminous coal and coke, square jacketed, standard fittings, including brush and firing tools, for approximately 380 square feet installed steam radiation.

The radiation item priced was large core, cast-iron radiation, 26 inches high.

GEOGRAPHICAL PRICE STRUCTURE

Heating boilers and radiation are generally sold on a combination zone and freight equalization system, subject to numerous modifications.¹ For example, one large company has five freight plans applicable to different sections of the country and different situations. In certain States prices are quoted f. o. b. manufacturing plants or as-

¹ This analysis is based on information obtained from most of the large producers and from a few small firms.

sembling plants, with full freight allowed to railroad points at destination. In other States prices are quoted f. o. b. manufacturing plants, with actual freight charges not to exceed 30 cents per 100 pounds allowed, on either carlot or less than carlot shipments to any railroad point or destination; or f. o. b. assembling plants with no freight allowance. Freight costs will generally be equalized with competitive points of manufacture or distribution. In addition, there are various modifications or exceptions to the above methods.

Channels of Distribution.

Channels of distribution in the heating industry are relatively rigid. Sales are typically from the manufacturer to the jobber or wholesaler, then to the plumbing or heating contractor, who in turn installs the equipment. Most consumer purchases are made through the plumbing contractor. Some sales are made by the manufacturer directly to large retailers, such as mail order houses, chain stores, and cooperatives. Direct sales are also made to large users, such as the Government, industrial users, and contractors on large housing projects.

Two of the larger companies maintain company-owned wholesale outlets in many large cities, but sell also through independent wholesalers and jobbers. Another large company sells exclusively through independents but operates company-owned display rooms in many of the cities included in the survey. Smaller companies usually sell exclusively through independent distributors.

Trade, Quantity, and Other Discounts.

Trade discounts to jobbers and dealers are customarily 15 or 20 percent off the list price for heating boilers and 15 percent for radiation. Quantity discounts to the trade apply to orders of the specified quantities when ordered or released for immediate shipment; to orders from one buyer, covering a contract with one owner ordered shipped in carlots only within 12 months from date order is placed, or for installation in one building prior to its completion. Quantity discounts ordinarily apply only to straight carlot shipments of radiators and do not apply to mixed carlots of radiators and boilers.

The discount for carlot orders is customarily 5 percent off the trade base price (list less 15 percent or 20 percent, depending on the company). When the order is for two or more carlots some companies increase the quantity discount to 7½ percent. In some instances companies also increase the quantity discount on radiators to 10 percent if the order is for six or more carlots.

For radiators a carlot minimum is one containing not less than 5,500 square feet, while a minimum carlot shipment of heating boilers is not less than 24,000 pounds.

For the industry generally, invoices dated from the 1st to the 15th of the month, inclusive, are subject to a cash discount of 2 percent if paid on or before the 25th of that month and are due net on the next succeeding day. Invoices dated from the 16th to the end of the month, inclusive, are subject to a cash discount of 2 percent if paid on or before the 10th of the next following month and are due net on the next succeeding day.

Freight allowances are deducted from the invoice before applying the cash discount. Prepaid freight or cartage charges paid by the producer and added to the invoice are not subject to cash discount.

In States where any manufacturers' or sales tax is payable on the transaction, this tax is added to the price.

Freight Allowances. (See table 198.)

Freight allowances vary slightly from producer to producer, but the same general pattern prevails. The United States is divided into several zones. In most of the area east of the Mississippi and north of the Ohio Rivers, prices are quoted f. o. b. manufacturing or assembling plants with full freight allowed to railroad points of destination. In the rest of the United States the freight allowance f. o. b. manufacturing plants is ordinarily limited to 30 cents per 100 pounds on both carlot and less than carlot shipments; no allowance is granted on shipments f. o. b. assembling plants. However, freight costs will be equalized with competitive points of manufacture or distribution. A few localities constitute exceptions to these general practices. Freight allowances are not granted on repairs or shipments of less than 100 pounds.

TABLE 198.—*Typical freight allowances to selected cities in equalizing with nearest producing plant*

City	Radiators (per 100 pounds)		Boilers (per 100 pounds)	
	Carlot rate	Allowance	Carlot rate	Allowance
Portland, Oreg.:				
Rail.....	\$1.05	\$0.30	\$1.19	\$0.30
Rail and water.....	1.90	.55	2.99	.40
Seattle, Wash.:				
Rail.....	1.05	.30	1.19	.30
Rail and water.....	1.90	.55	2.99	.40
Los Angeles, Calif.:				
Rail.....	1.05	.30	1.19	.30
Rail and water.....	.98	.55	2 1.05	.40
Houston, Tex.....	2.89	.43	4 1.08	.51
Miami, Fla.....	1 1.13	.42	1.10	.30
Charleston, S. C.:				
Rail.....	1.79	.44		
Rail and water.....	1.52	.34	.82	.30
Charlotte, N. C.....	1.68	.40	.68	.30
Richmond, Va.....	1.46	(¹)	2.50	.34
Des Moines, Iowa.....	4.42	.31	6.56	.41
Minneapolis, Minn.:				
Rail.....	.36	.30	7.57	.43
Rail and water.....	.29	.30	.36	.30
Omaha, Nebr.....	.50	.30	6.65	.40
Wichita, Kans.....	.61	.30	6.80	.39
Sioux Falls, S. Dak.....	.58	.30	6.67	.39
Fargo, N. Dak.....	.76	.30	6.76	.34

¹ To equalize Bayonne, N. J., delivery.

² To equalize Buffalo, N. Y., delivery.

³ To equalize rail, water and rail delivery, Bayonne, N. J.

⁴ To equalize Litchfield, Ill., delivery.

⁵ Full freight.

⁶ To equalize Michigan City, Ill., delivery.

⁷ To equalize Sheboygan, Wis., delivery.

For foreign sales, shipments are sold f. o. b. shipping point with freight allowed to the port of exit as on domestic shipments.

Freight equalization plays an important part in the pricing of both boilers and radiation, varying from the basic 30 cents per 100 pounds on deliveries to some cities to full freight allowance on others.²

² For example, in Burlington, Vt., Manchester, N. H., and Portland, Maine, radiation is freight equalized with competitive points of distribution, placing these cities in the full freight allowed group. For radiation the freight is also fully allowed to equalize Buffalo, N. Y., delivery.

Other Terms of Sale.

Prices are guaranteed for a limited time. If an advance occurs in the schedule of base prices, "immediate shipment orders" are accepted and invoiced at prices quoted if placed within 30 days of the price advance. On "future delivery orders" buyers are allowed 30 days in which to place orders covering bona fide contracts actually closed prior to the date of advance and those on which actual bids were submitted prior to the advance. For "hold orders" placed either prior to or after the advance, if released for immediate shipment within 30 days from the date of the advance, invoices are at the prices quoted before the advance. If not released within 30 days after the advance, "hold orders" are invoiced at the price in effect when released for shipment.

PRICE LEVELS AND TRENDS

The prices of heating boilers and of radiation vary considerably geographically due primarily to variations in the freight allowances.

HEATING BOILERS

Geographical Variation in Prices and Spreads.

The wholesale prices of heating boilers in January 1935 ranged from about \$75 to \$80 in "zone A" cities to \$105 to \$110 in the Rocky Mountain area where a substantial freight charge is paid by the purchaser.

The lowest wholesale prices recorded during the period studied occurred from November 1937 to March 1938; the price range was about \$72 to \$102. Highest prices were reported during September-October 1937, when the range was from \$88 to \$120.

In September 1939 wholesale prices for heating boilers ranged from a low of approximately \$75 to a high of approximately \$110. Retail prices varied from \$90 in a city near the manufacturing plant to \$146 in a city in the Rocky Mountain area. The distribution by city for both wholesale and retail prices is shown below, on chart XXXIII, and in table 199. The country-wide variations in the prices and the close relationship between the wholesale and retail series are clearly indicated.

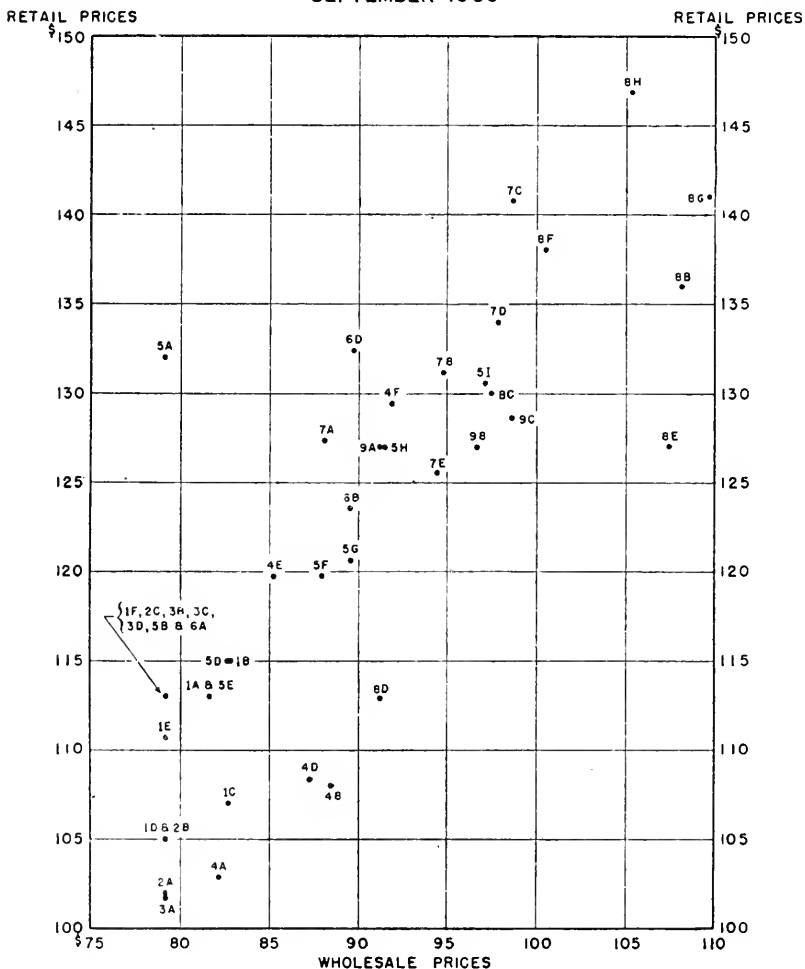
Typical price	Number of cities		Typical price	Number of cities	
	Whole-sale	Retail		Whole-sale	Retail
\$75 to \$79.99	13	-----	\$115 to \$119.99	-----	4
\$80 to \$84.99	6	-----	\$120 to \$124.99	-----	2
\$85 to \$89.99	8	-----	\$125 to \$129.99	-----	8
\$90 to \$94.99	6	-----	\$130 to \$134.99	-----	6
\$95 to \$99.99	6	-----	\$135 to \$139.99	-----	2
\$100 to \$104.99	1	3	\$140 to \$144.99	-----	2
\$105 to \$109.99	4	5	\$145 to \$149.99	-----	1
\$110 to \$114.99	-----	11			

In wholesale prices 13 cities fall in the \$75 to \$80 class and 8 in the \$85 to \$90 group.

This concentration of a number of cities in these price classes is probably the effect of zone pricing and freight equalization practiced in the

CHART XXIII

HEATING BOILERS

WHOLESALE AND RETAIL PRICES FOR SELECTED CITIES
SEPTEMBER 1939

industry. For retail prices, 11 cities reported a range between \$110 and \$115 while 8 cities fell in the \$125 to \$130 class. The tendency of cities to be concentrated in two price classes is to be expected in this distribution also because of the wholesale price structure.

As shown below, the average wholesale and retail prices in November 1939 in the cities surveyed were \$87.95 and \$119.76. The average spread or difference between the two series was 36 percent of the low. The composite data for the various geographical regions are as follows:

Region	Average price		Difference	
	Wholesale	Retail	Amount	Percent
I. New England.....	\$80.79	\$110.62	\$29.83	36.9
II. Middle Atlantic.....	79.20	106.67	27.47	34.7
III. East North Central.....	79.20	110.18	30.98	39.1
IV. West North Central.....	87.00	113.66	26.66	27.5
V. South Atlantic.....	86.09	121.36	35.27	41.0
VI. East South Central.....	86.17	122.99	36.82	42.7
VII. West South Central.....	94.78	131.74	36.96	39.0
VIII. Rocky Mountain.....	102.82	133.08	30.26	29.4
IX. Pacific.....	95.53	127.52	31.99	33.5
United States average.....	87.95	119.76	31.80	36.0

The average difference between wholesale and retail prices is, of course, not an accurate measurement of the spread for the individual cities. It is, however, roughly indicative of the geographical variation and the lack of uniformity in prices and spreads between areas.

Price Trends. (See chart XXIV and tables 200 to 209.)

Wholesale prices have been fairly steady for all companies in all regions, as shown by the indexes of the Bureau of Labor Statistics in which average prices for July–September 1939 are used as a basis for comparison. In 1935 the price index was 4 percent lower than in 1939. There was little change for about 7 months, when there was a rise of approximately 4 percent. The price again held steady, this time for 10 months, when a further rise of about 7 percent occurred. In September 1937 another 5-percent increase was recorded. This last rise was of temporary duration, lasting only 2 months, after which prices fell sharply to the low for the period—to approximately 90 percent of the 1939 levels. After 5 months a rise of 5 percent occurred, and in 2 months more a second rise to the base period level, which was maintained until September 1939. With minor exceptions, this trend was followed in all regions.

Apparently prices for heating boilers are determined seasonally, that is, prices are fixed at the beginning of the order period, in the late spring or early summer, and are then maintained until the next year's orders are due.

The retail price trend, to a considerable extent, follows the fluctuations in wholesale prices. The timing of the changes is approximately the same, but the magnitude of the movement is less than the swings in wholesale prices. The trends of retail prices in the various regions will be discussed in the following paragraphs.

At retail the price trend by regions shows considerable variation. (See chart XXIV.) In region I, New England, the price level in 1935 was 102.6 percent of the July–September 1939 average and continued at that level until June 1937. At that time the prices were raised by

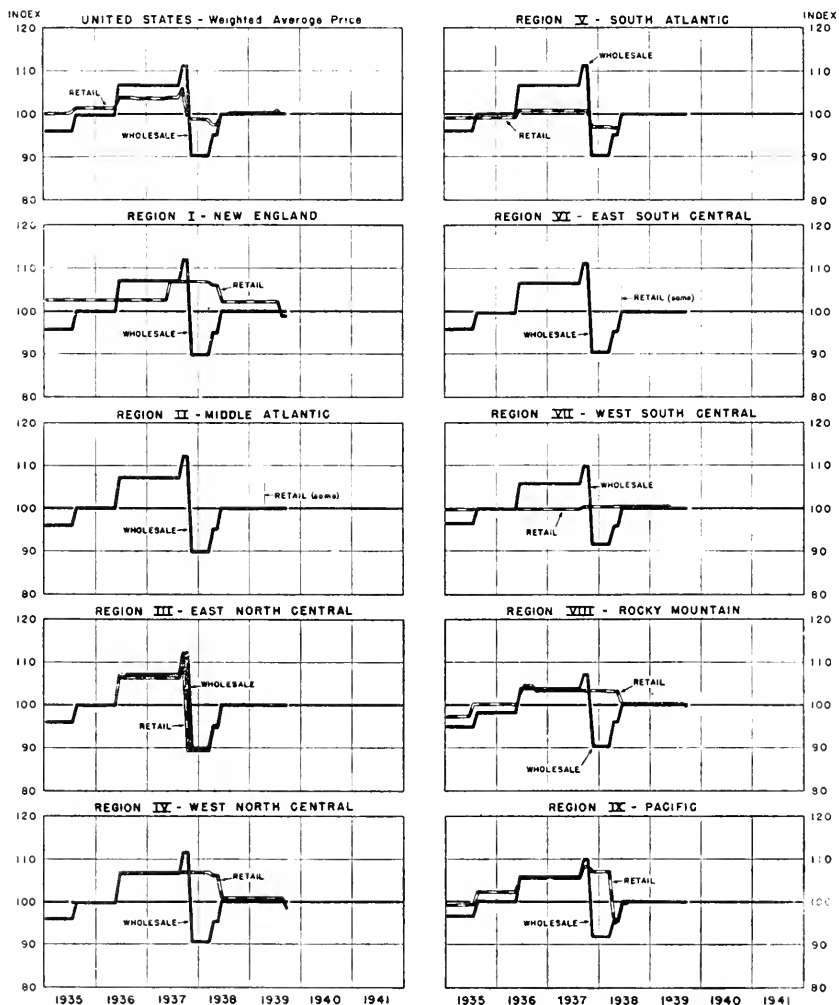
over 4 percent, and the index moved up to 106.9, where it remained until April 1938. A slight drop in April and May and a large decline in June brought typical prices down again to about the 1935 level

CHART XXIV

HEATING BOILERS

WHOLESALE AND RETAIL PRICE INDEXES

JULY - SEPTEMBER 1939 = 100



UNITED STATES BUREAU OF LABOR STATISTICS

(index 102.3), where they remained until August 1939. The index again dropped by 3.5 percent to a point slightly under the average for July-September 1939 (index 98.8).

In some measure retail prices follow the wholesale pattern but, as is common in many markets, they lag somewhat behind the wholesale

changes. Retail prices in the New England area were little affected by the drop in wholesale prices in November 1937, and they also failed to show the rise from March to June 1938.

In the East North Central region, retail and wholesale prices correlate very closely, rise paralleling rise and drop following drop.

In region IV, the West North Central, price rises have been closely timed, but when the wholesale price dropped the retail followed only after a considerable interval, and then declined 6 percent, while the wholesale price had fallen 23 percent and recovered 11 percent.

In the South Atlantic region retail prices followed wholesale in direction, but with very much less movement, either up or down.

In the East South Central region data are not complete from 1935 to 1939, but in the main it appears that retail prices follow wholesale from June 1938 on.

The West South Central area shows very little price movement at retail, the greatest change amounting to about one-half of 1 percent, despite wholesale price changes.

The Rocky Mountain region shows retail prices following wholesale markets closely on the rise, but failing to show corresponding drops.

In the Pacific area wholesale and retail prices are closely correlated with corresponding rises and declines. The one major price drop in wholesale prices was not followed by a cut in retail prices for 5 months.

TABLE 199.—*Heating boilers*

(Typical wholesale and retail prices for selected cities, September 1939)

Region and city	Prices		Region and city	Prices	
	Whole-sale	Retail		Whole-sale	Retail
REGION I. NEW ENGLAND			REGION V. SOUTH ATLANTIC—CON.		
A. Portland, Maine.....	\$81.61	\$113.00	F. Charlotte, N. C.....	\$87.84	\$119.75
B. Manchester, N. H.....	82.81	115.00	G. Charleston, S. C.....	89.52	120.56
C. Burlington, Vt.....	82.69	107.00	H. Atlanta, Ga.....	91.48	127.00
D. Boston, Mass.....	79.20	105.00	I. Miami, Fla.....	97.14	130.50
E. Providence, R. I.....	79.20	110.70			
F. Hartford, Conn.....	79.20	113.00			
REGION II. MIDDLE ATLANTIC			REGION VI. EAST SOUTH CENTRAL		
A. New York, N. Y.....	79.20	102.00	A. Louisville, Ky.....	79.20	113.00
B. Trenton, N. J.....	79.20	105.00	B. Memphis, Tenn.....	89.55	123.52
C. Philadelphia, Pa.....	79.20	113.00	D. Jackson, Miss.....	89.76	132.44
REGION III. EAST NORTH CENTRAL			REGION VII. WEST SOUTH CENTRAL		
A. Cleveland, Ohio.....	79.20	101.70	A. Little Rock, Ark.....	88.08	127.30
B. Detroit, Mich.....	79.20	113.00	B. Oklahoma City, Okla.....	94.82	131.20
C. Indianapolis, Ind.....	79.20	113.00	C. Austin, Tex.....	98.70	140.70
D. Chicago, Ill.....	79.20	113.00	D. Houston, Tex.....	97.86	134.00
REGION IV. WEST NORTH CENTRAL			E. New Orleans, La.....	94.44	125.50
A. Minneapolis, Minn.....	82.21	102.83	REGION VIII. ROCKY MOUNTAIN		
B. Fargo, N. Dak.....	88.47	108.00	B. Boise, Idaho.....	108.10	135.95
D. Des Moines, Iowa.....	87.27	108.33	C. Cheyenne, Wyo.....	97.48	130.00
E. Omaha, Nebr.....	85.22	119.75	D. Denver, Colo.....	91.24	112.81
F. Wichita, Kans.....	91.82	129.38	E. Salt Lake City, Utah.....	107.44	127.00
REGION V. SOUTH ATLANTIC			F. Reno, Nev.....	100.48	138.00
A. Wilmington, Del.....	79.20	132.05	G. Phoenix, Ariz.....	109.72	141.00
B. Baltimore, Md.....	79.20	113.00	H. Albuquerque, N. Mex.....	105.28	146.81
D. Charleston, W. Va.....	82.69	115.00	REGION IX. PACIFIC		
E. Richmond, Va.....	81.61	113.00	A. Seattle, Wash.....	91.24	127.00
			B. Portland, Oreg.....	96.66	127.00
			C. Los Angeles, Calif.....	98.70	128.55

Specifications: Boiler, heating, hand fired, for anthracite and bituminous coal and coke, square jacketed, standard fittings, including brush and firing tools, approximately 350 square feet installed steam radiation; each.

Wholesale: Manufacturer's list with discounts, manufacturer to jobber, f. o. b. cars destination.

Retail: Distributor to plumbing contractor, delivered to job site, city.

TABLE 200.—*Heating boilers*

COMPOSITE: UNITED STATES AVERAGE

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	96.1	100.1	June.....	106.7	103.9
February.....	96.1	100.1	July.....	106.7	103.9
March.....	96.1	100.1	August.....	106.7	103.9
April.....	96.1	100.1	September.....	111.4	106.0
May.....	96.1	100.1	October.....	111.4	99.9
June.....	96.1	100.1	November.....	90.3	98.8
July.....	96.1	100.4	December.....	90.3	98.8
August.....	99.9	101.3	1938		
September.....	99.9	101.3	January.....	90.3	98.8
October.....	99.9	101.3	February.....	90.3	98.8
November.....	99.9	101.3	March.....	90.3	98.7
December.....	99.9	101.3	April.....	95.2	97.5
1936			May.....	95.2	97.6
January.....	99.9	101.3	June.....	100.0	100.0
February.....	99.9	101.3	July.....	100.0	100.0
March.....	99.9	101.3	August.....	100.0	100.1
April.....	99.9	101.3	September.....	100.0	100.1
May.....	99.9	101.3	October.....	100.0	100.1
June.....	106.7	103.8	November.....	100.0	100.1
July.....	106.7	103.8	December.....	100.0	100.1
August.....	106.7	103.8	1939		
September.....	106.7	103.8	January.....	100.0	100.1
October.....	106.7	103.7	February.....	100.0	100.1
November.....	106.7	103.7	March.....	100.0	100.1
December.....	106.7	103.7	April.....	100.0	100.1
1937			May.....	100.0	100.1
January.....	106.7	103.8	June.....	100.0	100.1
February.....	106.7	103.7	July.....	100.0	100.9
March.....	106.7	103.7	August.....	100.0	100.1
April.....	106.7	103.7	September.....	100.0	99.9
May.....	106.7	103.7			

Specifications: Boiler, heating, hand fired, for anthracite and bituminous coal and coke, square jacketed, standard fittings, including brush and firing tools, approximately 380 square feet installed steam radiation; each.

Wholesale: Manufacturer's list with discounts, manufacturer to jobber, f. o. b. cars destination.

Retail: Distributor to plumbing contractor delivered to job site, city.

TABLE 201.—*Heating boilers*

REGION I. NEW ENGLAND

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	95.9	102.6	June.....	107.0	106.9
February.....	95.9	102.6	July.....	107.0	106.9
March.....	95.9	102.6	August.....	107.0	106.9
April.....	95.9	102.6	September.....	112.0	106.9
May.....	95.9	102.6	October.....	112.0	106.9
June.....	95.9	102.6	November.....	89.9	106.9
July.....	95.9	102.6	December.....	89.9	106.9
August.....	100.0	102.6	1938		
September.....	100.0	102.6	January.....	89.9	106.0
October.....	100.0	102.6	February.....	89.9	106.9
November.....	100.0	102.6	March.....	89.9	106.9
December.....	100.0	102.6	April.....	95.0	106.1
1936			May.....	95.0	106.1
January.....	100.0	102.6	June.....	100.0	102.3
February.....	100.0	102.6	July.....	100.0	102.3
March.....	100.0	102.6	August.....	100.0	102.3
April.....	100.0	102.6	September.....	100.0	102.3
May.....	100.0	102.6	October.....	100.0	102.3
June.....	107.0	102.6	November.....	100.0	102.3
July.....	107.0	102.6	December.....	100.0	102.3
August.....	107.0	102.6	1939		
September.....	107.0	102.6	January.....	100.0	102.3
October.....	107.0	102.6	February.....	100.0	102.3
November.....	107.0	102.6	March.....	100.0	102.3
December.....	107.0	102.6	April.....	100.0	102.3
1937			May.....	100.0	102.3
January.....	107.0	102.6	June.....	100.0	102.3
February.....	107.0	102.6	July.....	100.0	102.3
March.....	107.0	102.6	August.....	100.0	98.8
April.....	107.0	102.6	September.....	100.0	98.8
May.....	107.0	102.6			

Specifications: Boiler, heating, hand fired, for anthracite and bituminous coal and coke, square jacketed, standard fittings, including brush and firing tools, approximately 380 square feet installed steam radiation; each.

Wholesale: Manufacturer's list with discounts, manufacturer to jobber, f. o. b. cars destination.

Retail: Distributor to plumbing contractor, delivered to job site, city.

TABLE 202.—*Heating boilers*

REGION II. MIDDLE ATLANTIC

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	96.0	-----	June.....	107.1	-----
February.....	96.0	-----	July.....	107.1	-----
March.....	96.0	-----	August.....	107.1	-----
April.....	96.0	-----	September.....	112.1	-----
May.....	96.0	-----	October.....	112.1	-----
June.....	96.0	-----	November.....	89.9	-----
July.....	96.0	-----	December.....	89.9	-----
August.....	100.0	-----	1938		
September.....	100.0	-----	January.....	89.9	-----
October.....	100.0	-----	February.....	89.9	-----
November.....	100.0	-----	March.....	89.9	-----
December.....	100.0	-----	April.....	95.0	-----
1936			May.....	95.0	-----
January.....	100.0	-----	June.....	100.0	-----
February.....	100.0	-----	July.....	100.0	-----
March.....	100.0	-----	August.....	100.0	-----
April.....	100.0	-----	September.....	100.0	-----
May.....	100.0	-----	October.....	100.0	-----
June.....	107.1	-----	November.....	100.0	-----
July.....	107.1	-----	December.....	100.0	-----
August.....	107.1	-----	1939		
September.....	107.1	-----	January.....	100.0	-----
October.....	107.1	-----	February.....	100.0	-----
November.....	107.1	-----	March.....	100.0	-----
December.....	107.1	-----	April.....	100.0	-----
1937			May.....	100.0	-----
January.....	107.1	-----	June.....	100.0	-----
February.....	107.1	-----	July.....	100.0	-----
March.....	107.1	-----	August.....	100.0	-----
April.....	107.1	-----	September.....	100.0	100.0
May.....	107.1	-----			

Specifications: Boiler, heating, hand fired, for anthracite and bituminous coal and coke, square jacketed, standard fittings, including brush and firing tools, approximately 380 square feet installed steam radiation; each.

Wholesale: Manufacturer's list with discounts, manufacturer to jobber, f. o. b. cars destination.

Retail: Distributor to plumbing contractor, delivered to job site, city.

TABLE 203.—*Heating boilers*

REGION III.—EAST NORTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	96.0	-----	June.....	107.1	106.2
February.....	96.0	-----	July.....	107.1	106.2
March.....	96.0	-----	August.....	107.1	106.2
April.....	96.0	-----	September.....	112.1	111.5
May.....	96.0	-----	October.....	112.1	89.4
June.....	96.0	-----	November.....	89.9	89.4
July.....	96.0	-----	December.....	89.9	89.4
August.....	100.0	-----			
September.....	100.0	-----	1938		
October.....	100.0	-----	January.....	89.9	89.4
November.....	100.0	-----	February.....	89.9	89.4
December.....	100.0	-----	March.....	89.9	89.4
1936			April.....	95.0	94.7
January.....	100.0	-----	May.....	95.0	94.7
February.....	100.0	-----	June.....	100.0	100.0
March.....	100.0	-----	July.....	100.0	100.0
April.....	100.0	-----	August.....	100.0	100.0
May.....	100.0	-----	September.....	100.0	100.0
June.....	107.1	106.2	October.....	100.0	100.0
July.....	107.1	106.2	November.....	100.0	100.0
August.....	107.1	106.2	December.....	100.0	100.0
September.....	107.1	106.2			
October.....	107.1	106.2	1939		
November.....	107.1	106.2	January.....	100.0	100.0
December.....	107.1	106.2	February.....	100.0	100.0
1937			March.....	100.0	100.0
January.....	107.1	106.2	April.....	100.0	100.0
February.....	107.1	106.2	May.....	100.0	100.0
March.....	107.1	106.2	June.....	100.0	100.0
April.....	107.1	106.2	July.....	100.0	100.0
May.....	107.1	106.2	August.....	100.0	100.0
			September.....	100.0	100.0

Specifications: Boiler, heating, hand fired, for anthracite and bituminous coal and coke, square jacketed, standard fittings, including brush and firing tools, approximately 380 square feet installed steam radiation; each.

Wholesale: Manufacturer's list with discounts, manufacturer to jobber, f. o. b. cars destination.

Retail: Distributor to plumbing contractor, delivered to job site, city.

TABLE 204.—*Heating boilers*

REGION IV. WEST NORTH CENTRAL

[Wholesale and retail price indexes—July–September 1939 = 100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	96.0	-----	June.....	106.6	106.7
February.....	96.0	-----	July.....	106.6	106.7
March.....	96.0	-----	August.....	106.6	106.7
April.....	96.0	-----	September.....	111.4	106.7
May.....	96.0	-----	October.....	111.4	106.7
June.....	96.0	-----	November.....	90.4	106.7
July.....	96.0	99.9	December.....	90.4	106.7
August.....	99.8	99.9	1938		
September.....	99.8	99.9	January.....	90.4	106.7
October.....	99.8	99.9	February.....	90.4	106.7
November.....	99.8	99.9	March.....	90.4	106.7
December.....	99.8	99.9	April.....	95.2	106.3
1936			May.....	95.2	106.3
January.....	99.8	99.9	June.....	100.0	100.8
February.....	99.8	99.9	July.....	100.0	100.8
March.....	99.8	99.9	August.....	100.0	100.8
April.....	99.8	99.9	September.....	100.0	100.8
May.....	99.8	99.9	October.....	100.0	100.8
June.....	106.6	106.7	November.....	100.0	100.8
July.....	106.6	106.7	December.....	100.0	100.8
August.....	106.6	106.7	1939		
September.....	106.6	106.7	January.....	100.0	100.8
October.....	106.6	106.7	February.....	100.0	100.8
November.....	106.6	106.7	March.....	100.0	100.8
December.....	106.6	106.7	April.....	100.0	100.8
1937			May.....	100.0	100.8
January.....	106.6	106.7	June.....	100.0	100.8
February.....	106.6	106.7	July.....	100.0	100.8
March.....	106.6	106.7	August.....	100.0	100.8
April.....	106.6	106.7	September.....	100.0	98.5
May.....	106.6	106.7			

Specifications: Boiler, heating, hand fired, for anthracite and bituminous coal and coke, square jacketed, standard fittings, including brush and firing tools, approximately 380 square feet installed steam radiation; each.

Wholesale: Manufacturer's list with discounts, manufacturer to jobber, f. o. b. cars destination.

Retail: Distributor to plumbing contractor, delivered to job site, city.

TABLE 205.—*Heating boilers*

REGION V. SOUTH ATLANTIC

[Wholesale and retail price indexes—July–September 1939 = 100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	96.1	99.1	June.....	106.7	100.7
February.....	96.1	99.1	July.....	106.7	100.7
March.....	96.1	99.1	August.....	106.7	100.7
April.....	96.1	99.1	September.....	111.4	100.7
May.....	96.1	99.1	October.....	111.4	100.7
June.....	96.1	99.1	November.....	90.4	97.0
July.....	96.1	99.1	December.....	90.4	97.0
August.....	100.0	99.1	1938		
September.....	100.0	99.1	January.....	90.4	97.0
October.....	100.0	99.1	February.....	90.4	97.0
November.....	100.0	99.1	March.....	90.4	97.0
December.....	100.0	99.1	April.....	95.2	96.7
1936			May.....	95.2	96.7
January.....	100.0	99.1	June.....	100.0	100.0
February.....	100.0	99.1	July.....	100.0	100.0
March.....	100.0	99.1	August.....	100.0	100.0
April.....	100.0	99.1	September.....	100.0	100.0
May.....	100.0	99.1	October.....	100.0	100.0
June.....	106.7	100.7	November.....	100.0	100.0
July.....	106.7	100.7	December.....	100.0	100.0
August.....	106.7	100.7	1939		
September.....	106.7	100.7	January.....	100.0	100.0
October.....	106.7	100.7	February.....	100.0	100.0
November.....	106.7	100.7	March.....	100.0	100.0
December.....	106.7	100.7	April.....	100.0	100.0
1937			May.....	100.0	100.0
January.....	106.7	100.7	June.....	100.0	100.0
February.....	106.7	100.7	July.....	100.0	100.0
March.....	106.7	100.7	August.....	100.0	100.0
April.....	106.7	100.7	September.....	100.0	100.0
May.....	106.7	100.7			

Specifications: Boiler, heating, hand fired, for anthracite and bituminous coal and coke, square jacketed standard fittings, including brush and firing tools, approximately 380 square feet installed steam radiation each.

Wholesale: Manufacturer's list with discounts, manufacturer to jobber, f. o. b. cars destination.

Retail: Distributor to plumbing contractor, delivered to job site, city.

TABLE 206. *Heating boilers*

REGION VI. EAST SOUTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	95.8	-----	June.....	106.5	-----
February.....	95.8	-----	July.....	106.5	-----
March.....	95.8	-----	August.....	106.5	-----
April.....	95.8	-----	September.....	111.2	-----
May.....	95.8	-----	October.....	111.2	-----
June.....	95.8	-----	November.....	90.5	-----
July.....	95.8	-----	December.....	90.5	-----
August.....	99.6	-----	1938		
September.....	99.6	-----	January.....	90.5	-----
October.....	99.6	-----	February.....	90.5	-----
November.....	99.6	-----	March.....	90.5	-----
December.....	99.6	-----	April.....	95.3	-----
1936			May.....	95.3	-----
January.....	99.6	-----	June.....	100.0	100.0
February.....	99.6	-----	July.....	100.0	100.0
March.....	99.6	-----	August.....	100.0	100.0
April.....	99.6	-----	September.....	100.0	100.0
May.....	99.6	-----	October.....	100.0	100.0
June.....	106.5	-----	November.....	100.0	100.0
July.....	106.5	-----	December.....	100.0	100.0
August.....	106.5	-----	1939		
September.....	106.5	-----	January.....	100.0	100.0
October.....	106.5	-----	February.....	100.0	100.0
November.....	106.5	-----	March.....	100.0	100.0
December.....	106.5	-----	April.....	100.0	100.0
1937			May.....	100.0	100.0
January.....	106.5	-----	June.....	100.0	100.0
February.....	106.5	-----	July.....	100.0	100.0
March.....	106.5	-----	August.....	100.0	100.0
April.....	106.5	-----	September.....	100.0	100.0
May.....	106.5	-----			

Specifications: Boiler, heating, hand fired, for anthracite and bituminous coal and coke, square jacketed, standard fittings, including brush and firing tools, approximately 380 square feet installed steam radiation; each.

Wholesale: Manufacturer's list with discounts, manufacturer to jobber, f. o. b. cars destination.

Retail: Distributor to plumbing contractor, delivered to job site, city.

TABLE 207.—*Heating boilers*

REGION VII. WEST SOUTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January	96.5	99.8	June	105.7	99.8
February	96.5	99.8	July	105.7	99.8
March	96.5	99.8	August	105.7	99.8
April	96.5	99.8	September	109.9	100.3
May	96.5	99.8	October	109.9	100.3
June	96.5	99.8	November	91.6	100.3
July	96.5	99.8	December	91.6	100.3
August	99.9	99.8	1938		
September	99.9	99.8	January	91.6	100.3
October	99.9	99.8	February	91.6	100.3
November	99.9	99.8	March	91.6	100.3
December	99.9	99.8	April	95.9	100.3
1936			May	95.9	100.3
January	99.9	99.8	June	100.0	100.3
February	99.9	99.8	July	100.0	100.3
March	99.9	99.8	August	100.0	100.3
April	99.9	99.8	September	100.0	100.3
May	99.9	99.8	October	100.0	100.3
June	105.7	99.8	November	100.0	100.3
July	105.7	99.8	December	100.0	100.3
August	105.7	99.8	1939		
September	105.7	99.8	January	100.0	100.3
October	105.7	99.8	February	100.0	100.3
November	105.7	99.8	March	100.0	100.3
December	105.7	99.8	April	100.0	100.3
1937			May	100.0	100.3
January	105.7	99.8	June	100.0	100.0
February	105.7	99.8	July	100.0	100.0
March	105.7	99.8	August	100.0	100.0
April	105.7	99.8	September	100.0	100.0
May	105.7	99.8			

Specifications: Boiler, heating, hand fired, for anthracite and bituminous coal and coke, square jacketed, standard fittings, including brush and firing tools, approximately 380 square feet installed steam radiation; each.

Wholesale: Manufacturer's list with discounts, manufacturer to jobber, f. o. b. cars destination.
Retail: Distributor to plumbing contractor, delivered to job site, city.

TABLE 208.—*Heating boilers*

REGION VIII. ROCKY MOUNTAIN

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	94.9	97.4	June.....	103.9	103.4
February.....	94.9	97.4	July.....	103.9	103.4
March.....	94.9	97.4	August.....	103.9	103.4
April.....	94.9	97.4	September.....	107.0	103.4
May.....	94.9	97.4	October.....	107.0	103.4
June.....	94.9	97.4	November.....	90.3	103.4
July.....	94.9	100.1	December.....	90.3	103.4
August.....	98.1	100.1	1938		
September.....	98.1	100.1	January.....	90.3	103.4
October.....	98.1	100.1	February.....	90.3	103.4
November.....	98.1	100.1	March.....	90.3	103.2
December.....	98.1	100.1	April.....	96.0	103.2
1936			May.....	96.0	103.2
January.....	98.1	100.1	June.....	100.0	100.1
February.....	98.1	100.1	July.....	100.0	100.1
March.....	98.1	100.1	August.....	100.0	100.1
April.....	98.1	100.1	September.....	100.0	100.1
May.....	98.1	99.9	October.....	100.0	100.1
June.....	103.9	104.2	November.....	100.0	100.1
July.....	103.9	104.2	December.....	100.0	100.1
August.....	103.9	104.2	1939		
September.....	103.9	104.2	January.....	100.0	100.1
October.....	103.9	103.4	February.....	100.0	100.1
November.....	103.9	103.4	March.....	100.0	100.1
December.....	103.9	103.4	April.....	100.0	100.1
1937			May.....	100.0	100.1
January.....	103.9	103.4	June.....	100.0	100.2
February.....	103.9	103.4	July.....	100.0	100.2
March.....	103.9	103.4	August.....	100.0	100.2
April.....	103.9	103.4	September.....	100.0	99.7
May.....	103.9	103.4			

Specifications: Boiler, heating, hand fired, for anthracite and bituminous coal and coke, square jacketed, standard fittings, including brush and firing tools, approximately 380 square feet installed steam radiation; each.

Wholesale: Manufacturer's list with discounts, manufacturer to jobber, f. o. b. cars destination.

Retail: Distributor to plumbing contractor, delivered to job site, city.

TABLE 209.—*Heating boilers*

REGION IX. PACIFIC

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	96.7	99.2	June.....	105.7	105.5
February.....	96.7	99.2	July.....	105.7	105.5
March.....	96.7	99.2	August.....	105.7	105.5
April.....	96.7	99.2	September.....	109.8	108.1
May.....	96.7	99.2	October.....	109.8	108.5
June.....	96.7	99.2	November.....	91.8	107.0
July.....	96.7	99.2	December.....	91.8	107.0
August.....	100.0	102.2	1938		
September.....	100.0	102.2	January.....	91.8	107.0
October.....	100.0	102.2	February.....	91.8	107.0
November.....	100.0	102.2	March.....	91.8	107.0
December.....	100.0	102.2	April.....	95.9	94.9
1936			May.....	95.9	95.3
January.....	100.0	102.2	June.....	100.0	99.6
February.....	100.0	102.2	July.....	100.0	99.6
March.....	100.0	102.2	August.....	100.0	100.0
April.....	100.0	102.2	September.....	100.0	100.0
May.....	100.0	102.2	October.....	100.0	100.0
June.....	105.7	105.5	November.....	100.0	100.0
July.....	105.7	105.5	December.....	100.0	100.0
August.....	105.7	105.5	1939		
September.....	105.7	105.5	January.....	100.0	100.0
October.....	105.7	105.5	February.....	100.0	100.0
November.....	105.7	105.5	March.....	100.0	100.0
December.....	105.7	105.5	April.....	100.0	100.0
1937			May.....	100.0	100.0
January.....	105.7	105.7	June.....	100.0	100.0
February.....	105.7	105.5	July.....	100.0	100.0
March.....	105.7	105.5	August.....	100.0	100.0
April.....	105.7	105.5	September.....	100.0	100.0
May.....	105.7	105.5			

Specifications: Boiler, heating, hand fired, for anthracite and bituminous coal and coke, square jacketed, standard fittings, including brush and firing tools, approximately 380 square feet installed steam radiation, each.

Wholesale: Manufacturer's list with discounts, manufacturer to jobber, f. o. b. cars destination.

Retail: Distributor to plumbing contractor, delivered to job site, city.

RADIATION

Geographical Variation in Prices and Spreads.

The wholesale price of 26-inch large core radiators in January 1935 ranged from 21 to 22 cents per square foot to about 35 cents per square foot. The low for radiation at wholesale was the period from January 1935 to July 1935 and the peak was from June 1938 to September 1939, with a price range of 26 cents to 40 cents per square foot.

The considerable geographical variation in September 1939 in wholesale and retail prices of radiation is shown in chart XXV and table 210 and in the following distribution by cities:

Price	Number of cities		Price	Number of cities	
	Wholesale	Retail		Wholesale	Retail
27 cents.....	15		35 cents.....	2	7
28 cents.....	3		36 cents.....	1	3
29 cents.....	4	1	37 cents.....		3
30 cents.....	4	2	38 cents.....	1	3
31 cents.....	4	1	39 cents.....	2	2
32 cents.....	4	10	40 cents.....		1
33 cents.....	3	7	41 cents.....		
34 cents.....	1	3	42 cents.....		1

Although there is a wide variation in both sets of prices, a considerable number are concentrated at certain typical levels. Wholesale prices in 15 cities are 27 cents per square foot and 10 cities have retail prices of approximately 32 cents per square foot.

The differences between wholesale and retail prices vary widely in different parts of the country. The smallest spreads on the average are to be found in the Pacific area. The average wholesale and retail prices in the cities surveyed were 30.2 cents and 34.4 cents, respectively, or a spread of 13.8 percent.

Region	Prices		Difference, percent
	Wholesale	Retail	
I. New England.....	\$0.278	\$0.324	16.7
II. Middle Atlantic.....	.272	.305	12.0
III. East North Central.....	.272	.320	17.7
IV. West North Central.....	.299	.345	15.3
V. South Atlantic.....	.300	.337	12.4
VI. East South Central.....	.289	.340	17.7
VII. West South Central.....	.333	.376	12.8
VIII. Rocky Mountain.....	.346	.387	11.9
IX. Pacific.....	.322	.349	8.2
United States average.....	0.302	0.344	13.8

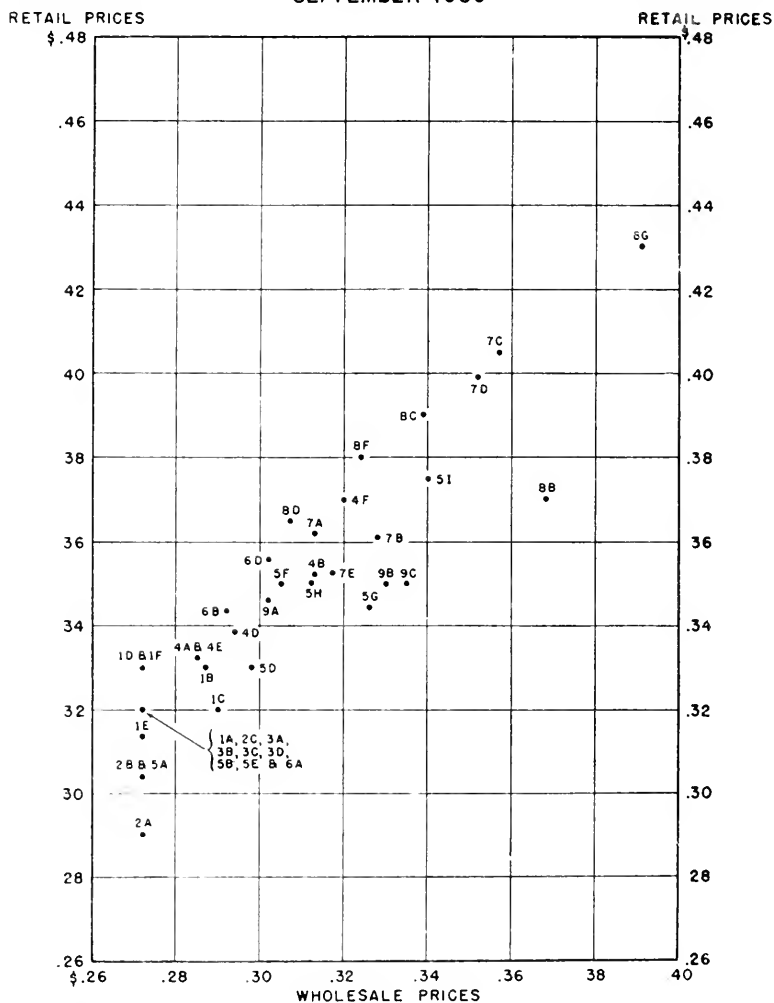
Price Trends. (See chart XXVI and tables 211 to 220.)

During the past 5 years prices for radiation, both at wholesale and retail, have shown a steady upward movement with only one decline of any consequence. Changes have not been quite the same in amount in all regions, but they have taken place practically simultaneously all over the United States.

CHART XXV

RADIATION

WHOLESALE AND RETAIL PRICES FOR SELECTED CITIES
SEPTEMBER 1939



According to the new index numbers computed by the Bureau of Labor Statistics (July to September 1939=100.0) wholesale prices remained at the January 1935 level (index 83.0) through July 1935. In August 1935 they advanced 5 percent. This level was maintained until June 1936 when a slight increase occurred, followed in July by another slight rise, amounting to 7 percent in all. The July 1936 price held until September 1937 when there was a further 5 percent increase, holding through March 1938. In April 1938 the price dropped 3 percent for 2 months, then rose 5 percent, at which level it was maintained until September 1939.

Retail prices follow closely the trend of the wholesale series in most regions. The variations will be described in the following paragraphs.

Retail prices for the New England region maintained the January 1935 level until June 1938, at which time they rose 4.5 percent. This new level was maintained through September 1939. In the Middle Atlantic region little retail price data are available. However, since September 1938 the price has remained stable.

In the East North Central region the curve of the indexes for retail prices closely parallels the trend of wholesale prices. Both series moved up about 7 percent from 1936 to 1939. The available indexes for 1937 to 1939 for the West North Central area show a similar close relationship between wholesale and retail price trends.

In the South Atlantic States, wholesale price trends were similar to the other regions. Retail prices, however, were fairly stable, showing a rise of less than 3 percent over the 5-year period. Even though the movement was so slight, its timing and general direction followed the wholesale pattern.

Only fragmentary trend information is available for retail prices in the East South Central and West South Central areas. There were no changes recorded from June 1938 through the date of the Bureau of Labor Statistics' survey, September 1939.

In region VIII, the Rocky Mountain area, only one variation differs from the usual wholesale pattern. In 1938 the downward movement in prices shown for this region in April and May is less than 1 percent, whereas in most of the regions it was from 2 to 3 percent. The movement, generally, and the date of change, follow the usual pattern. In this region retail prices show greater movement than in any other section. The direction of change follows the wholesale market, but not always with the same timing nor in similar proportions.

Prices on the Pacific coast follow the general trend. In the fall and winter of 1936 some minor fluctuations occurred in retail prices but this divergence was temporary and retail prices subsequently followed wholesale trends.

CHART XXVI
RADIATION
 WHOLESALE AND RETAIL PRICE INDEXES
 JULY- SEPTEMBER 1939 = 100

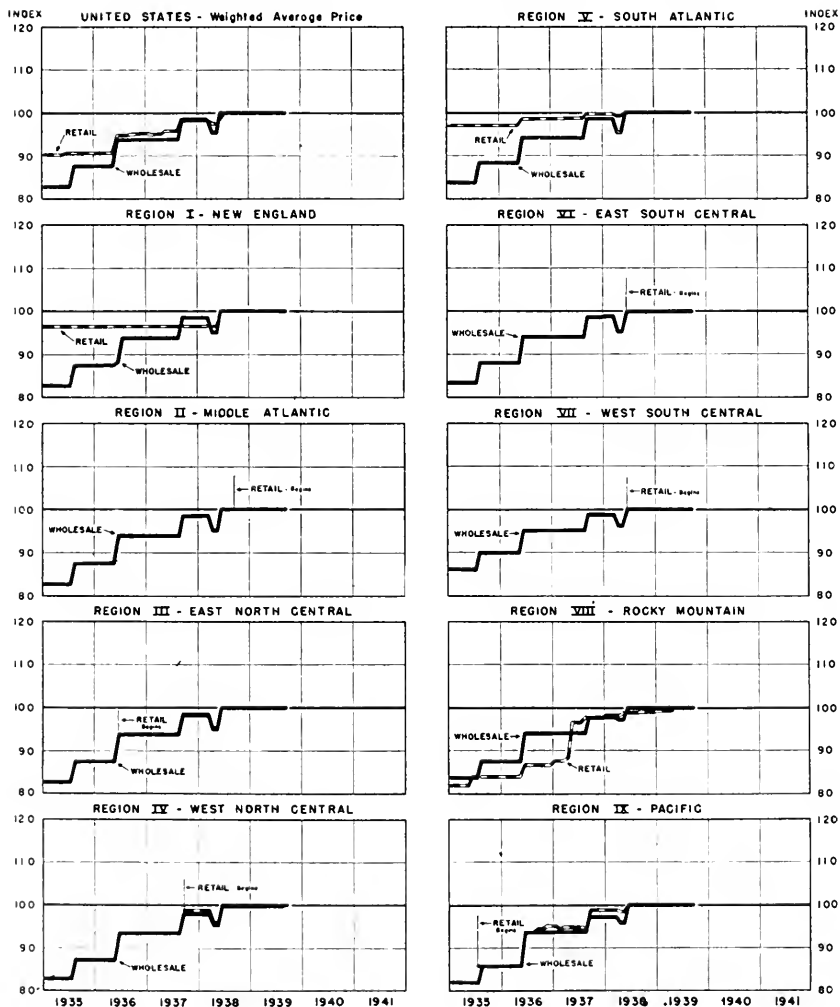


TABLE 210.—*Radiation*

[Typical wholesale and retail prices for selected cities, September 1939]

Region and city	Prices		Region and city	Prices	
	Whole-sale	Retail		Whole-sale	Retail
REGION I. NEW ENGLAND			REGION V. SOUTH ATLANTIC—CON.		
A. Portland, Maine	\$0. 2720	\$0. 3200	E. Richmond, Va	\$0. 2720	\$0. 3200
B. Manchester, N. H. ....	. 2870	. 3300	F. Charlotte, N. C. ....	. 3050	. 3500
C. Burlington, Vt. ....	. 2900	. 3200	G. Charleston, S. C. ....	. 3260	. 3443
D. Boston, Mass. ....	. 2720	. 3300	H. Atlanta, Ga. ....	. 3120	. 3500
E. Providence, R. I. ....	. 2720	. 3135	I. Miami, Fla. ....	. 3400	. 3750
F. Hartford, Conn. ....	. 2720	. 3300			
REGION II. MIDDLE ATLANTIC			REGION VI. EAST SOUTH CENTRAL		
A. New York, N. Y. ....	. 2720	. 2900	A. Louisville, Ky .....	. 2720	. 3200
B. Trenton, N. J. ....	. 2720	. 3040	B. Memphis, Tenn. ....	. 2920	. 3436
C. Philadelphia, Pa. ....	. 2720	. 3200	D. Jackson, Miss. ....	. 3020	. 3557
REGION III. EAST NORTH CENTRAL			REGION VII. WEST SOUTH CENTRAL		
A. Cleveland, Ohio. ....	. 2720	. 3200	A. Little Rock, Ark .....	. 3130	. 3620
B. Detroit, Mich. ....	. 2720	. 3200	B. Oklahoma City, Okla. ....	. 3280	. 3611
C. Indianapolis, Ind. ....	. 2720	. 3200	C. Austin, Tex. ....	. 3570	. 4050
D. Chicago, Ill. ....	. 2720	. 3200	D. Houston, Tex. ....	. 3520	. 3990
REGION IV. WEST NORTH CENTRAL			E. New Orleans, La. ....	. 3170	. 3526
A. Minneapolis, Minn. ....	. 2850	. 3325	REGION VIII. ROCKY MOUNTAIN		
B. Fargo, N. Dak. ....	. 3130	. 3525	B. Boise, Idaho .....	. 3680	. 3700
D. Des Moines, Iowa. ....	. 2940	. 3384	C. Cheyenne, Wyo. ....	. 3390	. 3900
E. Omaha, Nebr. ....	. 2850	. 3325	D. Denver, Colo. ....	. 3070	. 3650
F. Wichita, Kans. ....	. 3200	. 3700	F. Reno, Nev. ....	. 3240	. 3800
REGION V. SOUTH ATLANTIC			G. Phoenix, Ariz. ....	. 3910	. 4300
A. Wilmington, Del. ....	. 2720	. 3040	REGION IX. PACIFIC		
B. Baltimore, Md. ....	. 2720	. 3200	A. Seattle, Wash. ....	. 3020	. 3460
D. Charleston, W. Va. ....	. 2980	. 3300	B. Portland, Oreg. ....	. 3300	. 3500
			C. Los Angeles, Calif. ....	. 3350	. 3500

Specification: Radiation, cast iron, 26 inches high; per square foot.

Wholesale: Manufacturer's list with discounts, manufacturer to jobber, f. o. b. cars destination.

Retail: Distributor to plumbing contractor, delivered to job site, city.

TABLE 211.—*Radiation*
COMPOSITE UNITED STATES AVERAGE
[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	83.0	90.4	June.....	93.9	95.8
February.....	83.0	90.4	July.....	93.9	95.8
March.....	83.0	90.4	August.....	93.9	95.8
April.....	83.0	90.4	September.....	98.4	98.8
May.....	83.0	90.4	October.....	98.4	98.8
June.....	83.0	90.7	November.....	98.4	98.8
July.....	83.0	90.7	December.....	98.4	98.8
August.....	87.6	90.7	1938		
September.....	87.6	90.7	January.....	98.4	98.8
October.....	87.6	90.7	February.....	98.4	98.8
November.....	87.6	90.7	March.....	98.4	98.8
December.....	87.6	90.7	April.....	95.5	97.5
1936			May.....	95.5	97.5
January.....	87.6	90.7	June.....	100.0	99.9
February.....	87.6	90.7	July.....	100.0	100.0
March.....	87.6	90.7	August.....	100.0	100.0
April.....	87.6	90.7	September.....	100.0	100.0
May.....	87.6	90.7	October.....	100.0	100.0
June.....	93.8	94.8	November.....	100.0	100.0
July.....	93.9	94.8	December.....	100.0	100.0
August.....	93.9	94.8	1939		
September.....	93.9	95.0	January.....	100.0	100.0
October.....	93.9	95.0	February.....	100.0	100.0
November.....	93.9	95.2	March.....	100.0	100.0
December.....	93.9	95.2	April.....	100.0	100.0
1937			May.....	100.0	100.0
January.....	93.9	95.3	June.....	100.0	100.0
February.....	93.9	95.1	July.....	100.0	100.0
March.....	93.9	95.2	August.....	100.0	100.0
April.....	93.9	95.2	September.....	100.0	100.0
May.....	93.9	95.8			

Specification: Radiation, cast iron, 26 inches high; per square foot.

Wholesale: Manufacturer's list with discounts, manufacturer to jobber, f. o. b. cars destination.

Retail: Distributor to plumbing contractor, delivered to job site, city.

TABLE 212.--*Radiation*

REGION I. NEW ENGLAND

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	82.8	96.6	June.....	93.8	96.6
February.....	82.8	96.6	July.....	93.8	96.6
March.....	82.8	96.6	August.....	93.8	96.6
April.....	82.8	96.6	September.....	98.5	96.6
May.....	82.8	96.6	October.....	98.5	96.6
June.....	82.8	96.6	November.....	98.5	96.6
July.....	82.8	96.6	December.....	98.5	96.6
August.....	87.5	96.6	1938		
September.....	87.5	96.6	January.....	98.5	96.6
October.....	87.5	96.6	February.....	98.5	96.6
November.....	87.5	96.6	March.....	98.5	96.6
December.....	87.5	96.6	April.....	95.2	96.6
1936			May.....	95.2	96.6
January.....	87.5	96.6	June.....	100.0	100.0
February.....	87.5	96.6	July.....	100.0	100.0
March.....	87.5	96.6	August.....	100.0	100.0
April.....	87.5	96.6	September.....	100.0	100.0
May.....	87.5	96.6	October.....	100.0	100.0
June.....	88.2	96.6	November.....	100.0	100.0
July.....	93.8	93.6	December.....	100.0	100.0
August.....	93.8	96.6	1939		
September.....	93.8	96.6	January.....	100.0	100.0
October.....	93.8	96.6	February.....	100.0	100.0
November.....	93.8	96.6	March.....	100.0	100.0
December.....	93.8	96.6	April.....	100.0	100.0
1937			May.....	100.0	100.0
January.....	93.8	96.6	June.....	100.0	100.0
February.....	93.8	96.6	July.....	100.0	100.0
March.....	93.8	96.6	August.....	100.0	100.0
April.....	93.8	96.6	September.....	100.0	100.0
May.....	93.8	96.6			

Specification: Radiation, cast iron, 26 inches high; per square foot.

Wholesale: Manufacturer's list with discounts, manufacturer to jobber, f. o. b. cars destination.

Retail: Distributor to plumbing contractor, delivered to job site, city.

TABLE 213.—*Radiation*

REGION II. MIDDLE ATLANTIC

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	82.7	-----	June.....	93.8	-----
February.....	82.7	-----	July.....	93.8	-----
March.....	82.7	-----	August.....	93.8	-----
April.....	82.7	-----	September.....	98.5	-----
May.....	82.7	-----	October.....	98.5	-----
June.....	82.7	-----	November.....	98.5	-----
July.....	82.7	-----	December.....	98.5	-----
August.....	87.5	-----	1938		
September.....	87.5	-----	January.....	98.5	-----
October.....	87.5	-----	February.....	98.5	-----
November.....	87.5	-----	March.....	98.5	-----
December.....	87.5	-----	April.....	95.2	-----
1936			May.....	95.2	-----
January.....	87.5	-----	June.....	100.0	-----
February.....	87.5	-----	July.....	100.0	-----
March.....	87.5	-----	August.....	100.0	-----
April.....	87.5	-----	September.....	100.0	100.0
May.....	87.5	-----	October.....	100.0	100.0
June.....	93.8	-----	November.....	100.0	100.0
July.....	93.8	-----	December.....	100.0	100.0
August.....	93.8	-----	1939		
September.....	93.8	-----	January.....	100.0	100.0
October.....	93.8	-----	February.....	100.0	100.0
November.....	93.8	-----	March.....	100.0	100.0
December.....	93.8	-----	April.....	100.0	100.0
1937			May.....	100.0	100.0
January.....	93.8	-----	June.....	100.0	100.0
February.....	93.8	-----	July.....	100.0	100.0
March.....	93.8	-----	August.....	100.0	100.0
April.....	93.8	-----	September.....	100.0	100.0
May.....	93.8	-----			

Specification: Radiation, cast iron, 26 inches high; per square foot.

Wholesale: Manufacturer's list with discounts, manufacturer to jobber, f. o. b. cars destination.

Retail: Distributor to plumbing contractor, delivered to job site, city.

TABLE 214.—*Radiation*

REGION III. EAST NORTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	82.7	-----	June.....	93.8	93.8
February.....	82.7	-----	July.....	93.8	93.8
March.....	82.7	-----	August.....	93.8	93.8
April.....	82.7	-----	September.....	98.5	98.4
May.....	82.7	-----	October.....	98.5	98.4
June.....	82.7	-----	November.....	98.5	98.4
July.....	82.7	-----	December.....	98.5	98.4
August.....	87.5	-----			
September.....	87.5	-----	1938		
October.....	87.5	-----	January.....	98.5	98.4
November.....	87.5	-----	February.....	98.5	98.4
December.....	87.5	-----	March.....	98.5	98.4
1936			April.....	95.2	95.3
January.....	87.5	-----	May.....	95.2	95.3
February.....	87.5	-----	June.....	100.0	100.0
March.....	87.5	-----	July.....	100.0	100.0
April.....	87.5	-----	August.....	100.0	100.0
May.....	87.5	-----	September.....	100.0	100.0
June.....	93.8	93.8	October.....	100.0	100.0
July.....	93.8	93.8	November.....	100.0	100.0
August.....	93.8	93.8	December.....	100.0	100.0
September.....	93.8	93.8			
October.....	93.8	93.8	1939		
November.....	93.8	93.8	January.....	100.0	100.0
December.....	93.8	93.8	February.....	100.0	100.0
1937			March.....	100.0	100.0
January.....	93.8	93.8	April.....	100.0	100.0
February.....	93.8	93.8	May.....	100.0	100.0
March.....	93.8	93.8	June.....	100.0	100.0
April.....	93.8	93.8	July.....	100.0	100.0
May.....	93.8	93.8	August.....	100.0	100.0
			September.....	100.0	100.0

Specification: Radiation, cast iron, 26 inches high; per square foot.

Wholesale: Manufacturer's list with discounts, manufacturer to jobber, f. o. b. cars destination.

Retail: Distributor to plumbing contractor, delivered to job site, city.

TABLE 215.—*Radiation*

REGION IV. WEST NORTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January	82.7		June	93.6	
February	82.7		July	93.6	
March	82.7		August	93.6	
April	82.7		September	97.9	98.8
May	82.7		October	97.9	98.8
June	82.7		November	97.9	98.8
July	82.7		December	97.9	98.8
August	87.3		1938		
September	87.3		January	97.9	98.8
October	87.3		February	97.9	98.8
November	87.3		March	97.9	98.8
December	87.3		April	95.5	96.2
1936			May	95.5	96.2
January	87.3		June	100.0	99.8
February	87.3		July	100.0	99.8
March	87.3		August	100.0	99.8
April	87.2		September	100.0	99.8
May	87.3		October	100.0	99.8
June	93.6		November	100.0	99.8
July	93.6		December	100.0	99.8
August	93.6		1939		
September	93.6		January	100.0	99.8
October	93.6		February	100.0	99.8
November	93.6		March	100.0	99.8
December	93.6		April	100.0	99.8
1937			May	100.0	99.8
January	93.6		June	100.0	99.8
February	93.6		July	100.0	99.8
March	93.6		August	100.0	99.8
April	93.6		September	100.0	100.3
May	93.6				

Specification: Radiation, cast iron, 26 inches high; per square foot.

Wholesale: Manufacturer's list with discounts, manufacturer to jobber, f. o. b. cars destination.

Retail: Distributor to plumbing contractor, delivered to job site, city.

TABLE 216.—*Radiation*

REGION V. SOUTH ATLANTIC

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	83.8	97.2	June.....	94.1	98.7
February.....	83.8	97.2	July.....	94.1	98.7
March.....	83.8	97.2	August.....	94.1	98.7
April.....	83.8	97.2	September.....	98.6	99.8
May.....	83.8	97.2	October.....	98.6	99.8
June.....	83.8	97.2	November.....	98.6	99.8
July.....	83.8	97.2	December.....	98.6	99.8
August.....	88.3	97.2	1938		
September.....	88.3	97.2	January.....	98.6	99.8
October.....	88.3	97.2	February.....	98.6	99.8
November.....	88.3	97.2	March.....	98.6	99.8
December.....	88.3	97.2	April.....	95.5	99.5
1936			May.....	95.5	99.5
January.....	88.3	97.2	June.....	100.0	100.0
February.....	88.3	97.2	July.....	100.0	100.0
March.....	88.3	97.2	August.....	100.0	100.0
April.....	88.3	97.2	September.....	100.0	100.0
May.....	88.3	97.2	October.....	100.0	100.0
June.....	94.1	98.7	November.....	100.0	100.0
July.....	94.1	98.7	December.....	100.0	100.0
August.....	94.1	98.7	1939		
September.....	94.1	98.7	January.....	100.0	100.0
October.....	94.1	98.7	February.....	100.0	100.0
November.....	94.1	98.7	March.....	100.0	100.0
December.....	94.1	98.7	April.....	100.0	100.0
1937			May.....	100.0	100.0
January.....	94.1	98.7	June.....	100.0	100.0
February.....	94.1	98.7	July.....	100.0	100.0
March.....	94.1	98.7	August.....	100.0	100.0
April.....	94.1	98.7	September.....	100.0	100.0
May.....	94.1	98.7			

Specification: Radiation, cast iron, 26 inches high; per square foot.

Wholesale: Manufacturer's list with discounts, manufacturer to jobber, f. o. b., cars destination.

Retail: Distributor to plumbing contractor, delivered to job site, city.

TABLE 217.—*Radiation*
 REGION VI. EAST SOUTH CENTRAL
 [Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	83.5	-----	June.....	94.1	-----
February.....	83.5	-----	July.....	94.1	-----
March.....	83.5	-----	August.....	94.1	-----
April.....	83.5	-----	September.....	98.6	-----
May.....	83.5	-----	October.....	98.6	-----
June.....	83.5	-----	November.....	98.6	-----
July.....	83.5	-----	December.....	98.6	-----
August.....	88.1	-----			
September.....	88.1	-----	1938		
October.....	88.1	-----	January.....	98.7	-----
November.....	88.1	-----	February.....	98.7	-----
December.....	88.1	-----	March.....	98.7	-----
			April.....	95.4	-----
1936			May.....	95.4	-----
January.....	88.1	-----	June.....	100.0	100.0
February.....	88.1	-----	July.....	100.0	100.0
March.....	88.1	-----	August.....	100.0	100.0
April.....	88.1	-----	September.....	100.0	100.0
May.....	88.1	-----	October.....	100.0	100.0
June.....	94.1	-----	November.....	100.0	100.0
July.....	94.1	-----	December.....	100.0	100.0
August.....	94.1	-----			
September.....	94.1	-----	1939		
October.....	94.1	-----	January.....	100.0	100.0
November.....	94.1	-----	February.....	100.0	100.0
December.....	94.1	-----	March.....	100.0	100.0
			April.....	100.0	100.0
1937			May.....	100.0	100.0
January.....	94.1	-----	June.....	100.0	100.0
February.....	94.1	-----	July.....	100.0	100.0
March.....	94.1	-----	August.....	100.0	100.0
April.....	94.1	-----	September.....	100.0	100.0
May.....	94.1	-----			

Specification: Radiation cast iron, 26 inches high; per square foot.

Wholesale: Manufacturer's list with discounts, manufacturer to jobber, f. o. b. cars destination.

Retail: Distributor to plumbing contractor, delivered to job site, city.

TABLE 218.—*Radiation*

REGION VII. WEST SOUTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	86.2	-----	June.....	95.2	-----
February.....	86.2	-----	July.....	95.2	-----
March.....	86.2	-----	August.....	95.2	-----
April.....	86.2	-----	September.....	98.8	-----
May.....	86.2	-----	October.....	98.8	-----
June.....	86.2	-----	November.....	98.8	-----
July.....	86.2	-----	December.....	98.8	-----
August.....	90.0	-----	1938		
September.....	90.0	-----	January.....	98.8	-----
October.....	90.0	-----	February.....	98.8	-----
November.....	90.0	-----	March.....	98.8	-----
December.....	90.0	-----	April.....	96.2	-----
1936			May.....	96.2	-----
January.....	90.0	-----	June.....	100.0	100.0
February.....	90.0	-----	July.....	100.0	100.0
March.....	90.0	-----	August.....	100.0	100.0
April.....	90.0	-----	September.....	100.0	100.0
May.....	90.0	-----	October.....	100.0	100.0
June.....	95.2	-----	November.....	100.0	100.0
July.....	95.2	-----	December.....	100.0	100.0
August.....	95.2	-----	1939		
September.....	95.2	-----	January.....	100.0	100.0
October.....	95.2	-----	February.....	100.0	100.0
November.....	95.2	-----	March.....	100.0	100.0
December.....	95.2	-----	April.....	100.0	100.0
1937			May.....	100.0	100.0
January.....	95.2	-----	June.....	100.0	100.0
February.....	95.2	-----	July.....	100.0	100.0
March.....	95.2	-----	August.....	100.0	100.0
April.....	95.2	-----	September.....	100.0	100.0
May.....	95.2	-----			

Specification: Radiation, cast iron, 26 inches high; per square foot.

Wholesale: Manufacturer's list with discounts, manufacturer to jobber, f. o. b. cars destination.

Retail: Distributor to plumbing contractor, delivered to job site, city.

TABLE 219.—*Radiation*

REGION VIII, ROCKY MOUNTAIN

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	83.8	82.0	June.....	94.0	96.7
February.....	83.8	82.0	July.....	94.0	96.7
March.....	83.8	82.0	August.....	94.0	97.7
April.....	83.8	82.0	September.....	97.7	97.7
May.....	83.8	82.0	October.....	97.7	97.7
June.....	83.8	84.0	November.....	97.7	97.7
July.....	83.8	84.0	December.....	97.7	97.7
August.....	87.6	84.0	1938		
September.....	87.6	84.0	January.....	97.7	98.3
October.....	87.6	84.0	February.....	97.7	98.3
November.....	87.6	84.0	March.....	97.7	98.3
December.....	87.6	84.0	April.....	97.3	98.3
1936			May.....	97.3	98.9
January.....	87.6	84.0	June.....	100.0	98.9
February.....	87.6	84.0	July.....	100.0	98.9
March.....	87.6	84.0	August.....	100.0	98.9
April.....	87.6	84.0	September.....	100.0	99.0
May.....	87.6	84.0	October.....	100.0	99.0
June.....	94.0	86.7	November.....	100.0	99.0
July.....	94.0	86.7	December.....	100.0	99.0
August.....	94.0	86.7	1939		
September.....	94.0	86.7	January.....	100.0	99.3
October.....	94.0	86.7	February.....	100.0	99.3
November.....	94.0	86.7	March.....	100.0	99.3
December.....	94.0	86.7	April.....	100.0	99.3
1937			May.....	100.0	100.0
January.....	94.0	87.7	June.....	100.0	100.0
February.....	94.0	87.7	July.....	100.0	100.0
March.....	94.0	87.7	August.....	100.0	100.0
April.....	94.0	88.5	September.....	100.0	100.0
May.....	94.0	96.7			

Specification: Radiation, cast iron, 26 inches high; per square foot.

Wholesale: Manufacturer's list with discounts, manufacturer to jobber, f. o. b. cars destination.

Retail: Distributor to plumbing contractor, delivered to job site, city.

TABLE 220.—*Radiation*

REGION IX. PACIFIC

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	81.9	-----	June.....	93.7	94.8
February.....	81.9	-----	July.....	93.7	94.8
March.....	81.9	-----	August.....	93.7	94.8
April.....	81.9	-----	September.....	97.3	98.8
May.....	81.9	-----	October.....	97.3	98.8
June.....	81.9	-----	November.....	97.3	98.8
July.....	81.9	85.8	December.....	97.3	98.8
August.....	85.8	85.8			
September.....	85.8	85.8	1938		
October.....	85.8	85.8	January.....	97.3	98.8
November.....	85.8	85.8	February.....	97.3	98.8
December.....	85.8	85.8	March.....	97.3	98.8
1936			April.....	96.1	98.5
January.....	85.8	85.8	May.....	96.1	98.5
February.....	85.8	85.8	June.....	100.0	99.7
March.....	85.8	85.8	July.....	100.0	100.0
April.....	85.8	85.8	August.....	100.0	100.0
May.....	85.8	85.8	September.....	100.0	100.0
June.....	93.7	93.7	October.....	100.0	100.0
July.....	93.7	93.7	November.....	100.0	100.0
August.....	93.7	93.7	December.....	100.0	100.0
September.....	93.7	94.4			
October.....	93.7	94.4	1939		
November.....	93.7	95.2	January.....	100.0	100.0
December.....	93.7	95.2	February.....	100.0	100.0
1937			March.....	100.0	100.0
January.....	93.7	95.2	April.....	100.0	100.0
February.....	93.7	94.4	May.....	100.0	100.0
March.....	93.7	94.8	June.....	100.0	100.0
April.....	93.7	94.8	July.....	100.0	100.0
May.....	93.7	94.8	August.....	100.0	100.0
			September.....	100.0	100.0

Specification: Radiation, cast iron, 26 inches high; per square foot.

Wholesale: Manufacturer's list with discounts, manufacturer to jobber, f. o. b. cars destination.

Retail: Distributor to plumbing contractor, delivered to job site, city.

CHAPTER XX

RANGE BOILERS

DESCRIPTION AND LOCATION OF THE INDUSTRY

The production of range boilers in 1937 totaled 929,000 and was valued at \$6,000,000, compared with 850,000 produced in 1935 with a valuation of \$5,000,000, an increase of 9 percent in number and 20 percent in value during this 2-year period. These figures do not include tanks and shells for water, copper and nonferrous alloy range boilers, or water heaters.¹

Range boilers are included by the census in "Plumbers' supplies, other than pipe and vitreous-china sanitary ware industry," and information on leading centers of production and on the distribution of sales is not available separately. (See page 365 for data as to plumbers' supplies.) In general, however, range boilers are produced in the same areas and distributed through the same channels as other plumbers' supplies.

Concentration.

Concentration of production is less in this field than for any other plumbing and heating product; only 42 percent of the total is manufactured by the four leading firms. This may be partially explained by the fact that many of the larger producers of plumbing equipment act only as distributors of range boilers produced by smaller specialty plants.

Products of the Industry.

The industry produces various types of range boilers, storage tanks, water heater coils, and expansion tanks. Range boilers are made in capacities of 18 to 192 gallons and may be of galvanized iron or steel, copper, or nonferrous alloys. Some are now made of Monel metal. The galvanized steel type is, however, the most common; about 929,000 were produced in 1937 as against 40,000 of all other types.

Specifications.

For pricing purposes, a standard 30-gallon galvanized steel range boiler, electric-welded and guaranteed for 85 pounds working pressure, was selected as representative. The price data at wholesale are per boiler, manufacturers' list with discounts, manufacturer to jobber, f. o. b. cars, destination. Retail price data are per boiler, distributor to plumbing contractor, delivered to job site, city.

PRICE STRUCTURE

Zone Freight System.

Range boilers are sold on an f. o. b. shipping point basis subject to freight allowances which are determined, for the most part, by a

¹ Census of Manufactures 1937: "Plumbers' supplies, not including pipe or vitreous-china sanitary ware," table 4, pp. 955-6.

zoning system. In the base zone—usually termed “Zone A”—full freight is allowed, and varying schemes of freight equalization are provided for points outside zone A.

For a representative company, zone A includes all points east of a line running along the Mississippi River as far north as St. Louis, and then along the Missouri River including destinations on both sides of the river, to Sioux City, Iowa, and then north along the Iowa-Minnesota boundary, but including Sioux Falls, S. Dak., and Fargo and Grand Forks, N. Dak. Zone B comprises points west of zone A, except the Pacific Coast States; zone C includes Washington, Oregon, and California. Other companies follow similar zoning systems.

In zone A full freight is allowed on shipments of six or more pieces for jobbers' stocks but no freight is allowed on direct shipments. In zone B, on rail shipments of six or more pieces for jobbers' stocks, freight is equalized with the rate from the zone A boundary, with Memphis, Tenn., as the most southerly equalizing point. On similar shipments via boat and rail, freight is allowed to Atlantic seaports or equalized with rates f. o. b. New Orleans. No freight is allowed on direct shipments.

In zone C (Washington, Oregon, and California) freight is equalized with the zone A boundary on carlot rail shipments only. No freight is allowed on less-than-carlot rail shipments. On boat and rail shipments of six or more pieces freight is allowed to Atlantic or Gulf seaports within the zone A boundary.

List Prices and Discounts.

Prices are quoted by list or net and producers sell to wholesalers or jobbers only. Some companies quote the list price and grant a discount—usually 5 percent on six or more items. Other companies quote net carlot and less-than-carlot list prices with differentials—usually 5 to 6 percent less in carlot quantities, while some companies quote net to jobbers, without any reference to lists or discounts. The carlot price applies only on a minimum 24,000 pound carlot, ordered for immediate shipment.

A cash discount of 2 percent is customary in the industry. One company allows the cash discount on payments made by the 10th of the month following shipment, another on payments the 15th of the month following shipment. The due date, therefore, varies with the individual company, but the rate of discount is uniform. For most companies, bills are due net after the discount date and become past due after 30 days. Interest, usually at 6 percent per annum, is charged on past due accounts. Prices are quoted subject to change without notice.

PRICE LEVELS AND TRENDS

The variations in freight allowances, which have been described heretofore, result in moderate geographical differences in wholesale delivered prices. In September 1939, for example, wholesale prices varied from about \$4.60 in zone A cities to a high of approximately \$5.35 in a city in the Rocky Mountain area, a range of about 15 percent. Retail prices varied more widely, from about \$5.10 in cities near a manufacturing plant to about \$7.95 in three cities outside the

zone A wholesale region, a range of about 60 percent. The distribution by cities for both wholesale and retail prices is shown below:

Typical price	Number of cities		Typical price	Number of cities	
	Whole-sale	Retail		Whole-sale	Retail
\$4.50 to \$4.74	27		\$6.50 to \$6.74		2
\$4.75 to \$4.99	10		\$6.75 to \$6.99		2
\$5.00 to \$5.24		1	\$7.00 to \$7.24		3
\$5.25 to \$5.49	1	1	\$7.25 to \$7.49		2
\$5.50 to \$5.74		6	\$7.50 to \$7.74		3
\$5.75 to \$5.99		9	\$7.75 to \$7.99		3
\$6.00 to \$6.24		4	\$8.00 or over		
\$6.25 to \$6.49		2			

Practically all of the manufacturers' prices were between \$4.50 and \$5 while half of the retail prices were between \$5.50 and \$6.25. In general, higher wholesale prices are accompanied by higher retail prices, but apparently retail prices are much higher in zones B and C, relative to wholesale prices.

The highest prices, both at wholesale and retail, were found in the Rocky Mountain and West South Central regions, that is, in zone B, and the lowest prices in areas near producing centers in zone A. The average regional differentials are shown below:

Region	Prices		Difference	
	Whole-sale	Retail	Amount	Percent
I. New England	\$4.60	\$6.67	\$2.07	45.0
II. Middle Atlantic	4.60	6.15	1.55	33.7
III. East North Central	4.60	5.37	.77	16.7
IV. West North Central	4.65	5.61	.96	20.6
V. South Atlantic	4.60	6.05	1.45	31.5
VI. East South Central	4.60	5.87	1.27	27.6
VII. West South Central	4.80	7.21	2.41	50.2
VIII. Rocky Mountain	4.86	7.33	2.47	50.8
IX. Pacific		6.48		
United States average (38 cities)	4.68	6.38	1.70	36.3

The spread between wholesale and retail prices varies greatly throughout the country. The average difference for the 38 cities included in the survey of the range boiler industry was 36.3 percent, but this figure is not representative of all regions. The margin ranged from 11 percent in an East North Central city near the producing area to 65 percent in a southwestern city. The regional variation was from 17 percent in the East North Central region to 51 percent in the Rocky Mountain region.

Price Trends— Wholesale Markets.

The trend of wholesale prices from 1935 to date was similar in all parts of the country, although the West South Central and Rocky Mountain regions varied slightly from the general pattern. (See chart XXVII and tables 221 to 229.)

These changes are reflected in the Bureau's indexes based on July to September 1939=100. In 1935, prices were at a fairly low level, 86 percent of the late 1939 level in all regions. The price

remained steady until August 1936 in all except the Rocky Mountain area where a very slight rise occurred in August 1935. Between August 1936 and April 1937 a sharp increase was reflected in an advance of 40 percent in the United States index. This high level was maintained until March 1938, when prices dropped 16 percent. After March 1938 slight changes were reported. Prices held at the same level from April 1939 to the end of that year.

There are two exceptions to this general course of prices. In the West South Central area the rise in 1937 was approximately 56 percent, and the decline in 1938 25 percent, while the rise for the Rocky Mountain region was 74 percent and the decline 33 percent. The variations may be explained in part by the fact that the cities in these regions, except New Orleans, are outside the base zone, and prices, while following the same general pattern, do not show the same rate of change. These two regions also show a slight upswing in October 1938 but they, too, reach the base period level in April 1939.

Price Trends—Retail Markets.

The trend of retail prices varied considerably from region to region. Retail prices have not followed wholesale prices except in one or two regions and then only with considerable lag.

The United States average of prices at retail shows price fluctuations within a very limited range. In 1935 the Bureau's Nation-wide index (based on July to September 1939=100) was approximately at the 1939 level and remained almost constant until October 1936, when a series of slight advances began. By January 1938 prices had increased 4 percent. From February to March 1938 a decline of 3 percent occurred, and from that date until this study was begun, there were only minor price changes at retail, so far as quoted prices were concerned.

In those regions for which retail price data are available back to 1935 only 4 show any price movements similar to the wholesale trends. In the New England region the retail prices followed wholesale prices with some degree of similarity but the February 1937 rise in the latter did not occur in retail prices until October and was a somewhat greater increase than the wholesale. The decline, however, followed the wholesale trend and after July 1938 there was very little change.

In the West North Central region an upswing in December 1937 paralleled the wholesale trend but the rise was of short duration and in March 1938 the retail price had fallen to the low for this region. It then remained near that level until the end of 1939 with one slight advance.

In the Rocky Mountain region retail prices fluctuated somewhat more freely than in other parts of the country but within a narrow range, not exceeding 5 percent. This region, like the New England and West North Central regions, showed the small typical price rise in 1937, a drop early in 1938, and a leveling off thereafter.

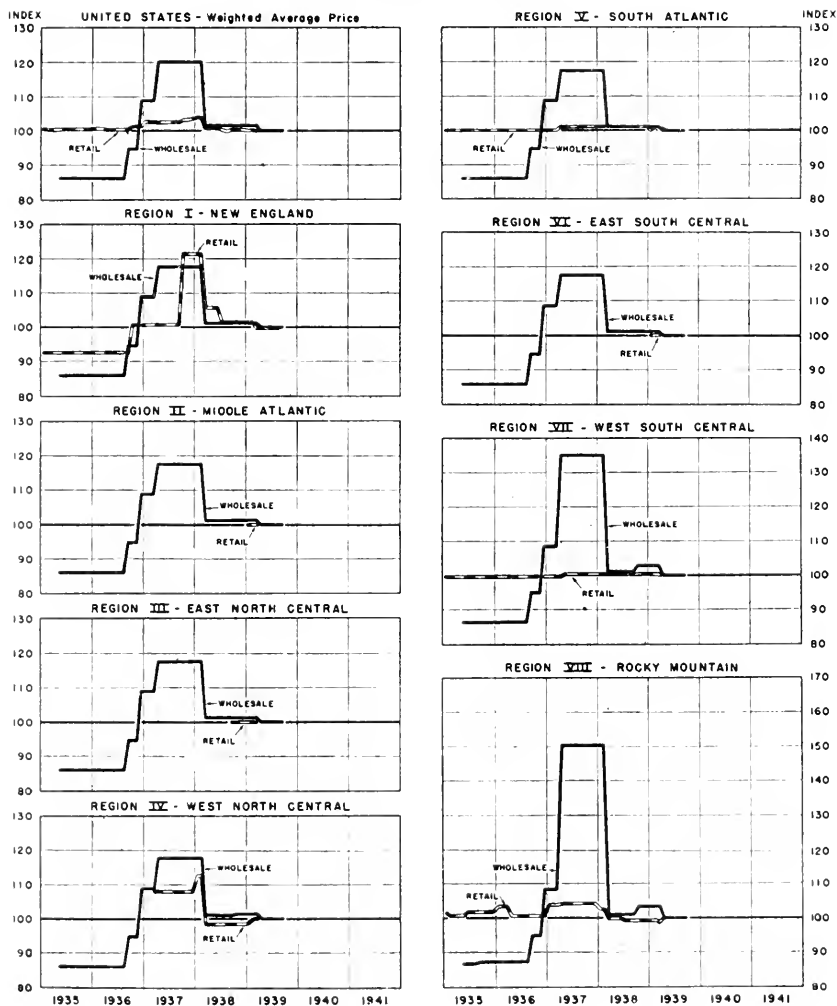
Price movements in the Pacific area have been minor. From 1935 until the fall of 1936 the price remained constant. Late in 1936 prices increased on the average about 5 percent; there were minor fluctuations toward a lower level during 1937, and a drop in 1938 to the level which prevailed throughout 1939.

CHART XXVII

RANGE BOILERS

WHOLESALE AND RETAIL PRICE INDEXES

JULY - SEPTEMBER 1939 = 100



No price change of any consequence occurred during the 1935-39 period in the South Atlantic and West South Central regions. The chief movement was a very small rise in 1937 and thereafter almost no movement occurred.

In the Middle Atlantic, East North Central, and East South Central regions, retail price data are not available prior to 1939. Since January 1939, however, no price changes have been reported.

TABLE 221.—Range boilers

COMPOSITE UNITED STATES AVERAGE

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	86.2	100.5	June.....	120.2	102.6
February.....	86.2	100.4	July.....	120.2	102.7
March.....	86.2	100.4	August.....	120.2	102.7
April.....	86.2	100.4	September.....	120.2	102.7
May.....	86.2	100.4	October.....	120.2	103.4
June.....	86.2	100.5	November.....	120.2	103.4
July.....	86.2	100.5	December.....	120.2	103.7
August.....	86.2	100.5	1938		
September.....	86.2	100.5	January.....	120.2	104.0
October.....	86.2	100.5	February.....	120.2	104.0
November.....	86.2	100.5	March.....	101.3	100.9
December.....	86.2	100.5	April.....	101.3	100.9
1936			May.....	101.3	100.9
January.....	86.2	100.6	June.....	101.3	100.9
February.....	86.2	100.6	July.....	101.3	100.2
March.....	86.2	100.6	August.....	101.3	99.9
April.....	86.2	100.4	September.....	101.3	100.2
May.....	86.2	100.4	October.....	101.5	100.2
June.....	86.2	100.4	November.....	101.5	100.2
July.....	86.2	100.4	December.....	101.5	100.2
August.....	86.2	100.4	1939		
September.....	94.8	100.4	January.....	101.5	100.0
October.....	94.8	101.4	February.....	101.5	100.2
November.....	94.8	101.4	March.....	101.5	100.0
December.....	108.9	101.4	April.....	100.0	100.1
1937			May.....	100.0	100.0
January.....	108.9	102.7	June.....	100.0	100.0
February.....	108.9	102.6	July.....	100.0	100.0
March.....	108.9	102.6	August.....	100.0	100.0
April.....	120.2	102.5	September.....	100.0	100.0
May.....	120.2	102.6			

Specification: Boilers, range, 30-gallon, standard galvanized, electric weld, 85-pound working pressure; each.

Wholesale: Manufacturer's list with discounts, manufacturer to jobber, f. o. b. cars destination.

Retail: Distributor to plumbing contractor, delivered to job site, city.

TABLE 222.—*Range boilers*

REGION I. NEW ENGLAND

[Wholesale and retail price indexes—July–September 1939 = 100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January		92.8	June	117.8	100.9
February		92.8	July	117.8	100.9
March		92.8	August	117.8	100.9
April		92.8	September	117.8	100.9
May	86.1	92.8	October	117.8	121.6
June	86.1	92.8	November	117.8	121.6
July	86.1	92.8	December	117.8	121.6
August	86.1	92.8			
September	86.1	92.8	1938		
October	86.1	92.8	January	117.8	121.6
November	86.1	92.8	February	117.8	121.6
December	86.1	92.8	March	101.3	105.8
1936			April	101.3	105.8
January	86.1	92.8	May	101.3	105.8
February	86.1	92.8	June	101.3	105.8
March	86.1	92.8	July	101.3	101.6
April	86.1	92.8	August	101.3	101.6
May	86.1	92.8	September	101.3	101.6
June	86.1	92.8	October	101.3	101.6
July	86.1	92.8	November	101.3	101.6
August	86.1	92.8	December	101.3	101.6
September	94.8	92.8			
October	94.8	100.9	1939		
November	94.8	100.9	January	101.3	101.6
December	108.9	100.9	February	101.3	108.0
1937			March	101.3	99.7
January	108.9	100.9	April	100.0	99.7
February	108.9	100.9	May	100.0	99.7
March	108.9	100.9	June	100.0	99.7
April	117.8	100.9	July	100.0	99.7
May	117.8	100.9	August	100.0	99.7
			September	100.0	100.4

Specification: Boilers, range, 30-gallon, standard galvanized, electric weld, 85-pound working pressure; each.

Wholesale: Manufacturer's list with discounts, manufacturer to jobber, f. o. b. cars destination.

Retail: Distributor to plumbing contractor, delivered to job site, city.

TABLE 223.—*Range boilers*

REGION II. MIDDLE ATLANTIC

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
May.....	86.1	-----	August.....	117.8	-----
June.....	86.1	-----	September.....	117.8	-----
July.....	86.1	-----	October.....	117.8	-----
August.....	86.1	-----	November.....	117.8	-----
September.....	86.1	-----	December.....	117.8	-----
October.....	86.1	-----	1938		
November.....	86.1	-----	January.....	117.8	-----
December.....	86.1	-----	February.....	117.8	-----
1936			March.....	101.3	-----
January.....	86.1	-----	April.....	101.3	-----
February.....	86.1	-----	May.....	101.3	-----
March.....	86.1	-----	June.....	101.3	-----
April.....	86.1	-----	July.....	101.3	-----
May.....	86.1	-----	August.....	101.3	-----
June.....	86.1	-----	September.....	101.3	-----
July.....	86.1	-----	October.....	101.3	-----
August.....	86.1	-----	November.....	101.3	-----
September.....	94.8	-----	December.....	101.3	-----
October.....	94.8	-----	1939		
November.....	94.8	-----	January.....	101.3	100.0
December.....	108.9	-----	February.....	101.3	100.0
1937			March.....	101.3	100.0
January.....	108.9	-----	April.....	100.0	100.0
February.....	108.9	-----	May.....	100.0	100.0
March.....	108.9	-----	June.....	100.0	100.0
April.....	117.8	-----	July.....	100.0	100.0
May.....	117.8	-----	August.....	100.0	100.0
June.....	117.8	-----	September.....	100.0	100.0
July.....	117.8	-----			

Specification: Boilers, range, 30-gallon, standard galvanized, electric weld, 85-pound working pressure each.

Wholesale: Manufacturer's list with discounts, manufacturer to jobber, f. o. b. cars destination.

Retail: Distributor to plumbing contractor, delivered to job site, city.

TABLE 224.—*Range boilers*

REGION III. EAST NORTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
May.....	86.1	-----	August.....	117.8	-----
June.....	86.1	-----	September.....	117.8	-----
July.....	86.1	-----	October.....	117.8	-----
August.....	86.1	-----	November.....	117.8	-----
September.....	86.1	-----	December.....	117.8	-----
October.....	86.1	-----			
November.....	86.1	-----	1938		
December.....	86.1	-----	January.....	117.8	-----
1936			February.....	117.8	-----
January.....	86.1	-----	March.....	101.3	-----
February.....	86.1	-----	April.....	101.3	-----
March.....	86.1	-----	May.....	101.3	-----
April.....	86.1	-----	June.....	101.3	-----
May.....	86.1	-----	July.....	101.3	-----
June.....	86.1	-----	August.....	101.3	-----
July.....	86.1	-----	September.....	101.3	100.0
August.....	86.1	-----	October.....	101.3	100.0
September.....	94.8	-----	November.....	101.3	100.0
October.....	94.8	-----	December.....	101.3	100.0
November.....	94.8	-----			
December.....	108.9	-----	1939		
1937			January.....	101.3	100.0
January.....	108.9	-----	February.....	101.3	100.0
February.....	108.9	-----	March.....	101.3	100.0
March.....	108.9	-----	April.....	100.0	100.0
April.....	117.8	-----	May.....	100.0	100.0
May.....	117.8	-----	June.....	100.0	100.0
June.....	117.8	-----	July.....	100.0	100.0
July.....	117.8	-----	August.....	100.0	100.0
			September.....	100.0	100.0

Specification: Boilers, range, 30-gallon, standard galvanized, electric weld, 85-pound working pressure; each.

Wholesale: Manufacturer's list with discounts, manufacturer to jobber, f. o. b. cars destination.

Retail: Distributor to plumbing contractor, delivered to job site, city.

TABLE 225.—*Range boilers*

REGION IV. WEST NORTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
May.....	86.1		August.....	117.8	108.1
June.....	86.1		September.....	117.8	108.1
July.....	86.1		October.....	117.8	108.1
August.....	86.1		November.....	117.8	108.1
September.....	86.1		December.....	117.8	108.1
October.....	86.1				
November.....	86.1		1938		
December.....	86.1		January.....	117.8	112.8
			February.....	117.8	112.8
1936			March.....	101.3	98.5
January.....	86.1		April.....	101.3	98.5
February.....	86.1		May.....	101.3	98.5
March.....	86.1		June.....	101.3	98.5
April.....	86.1		July.....	101.3	98.5
May.....	86.1		August.....	101.3	98.5
June.....	86.1		September.....	101.3	98.5
July.....	86.1		October.....	101.3	98.5
August.....	86.1		November.....	101.3	98.5
September.....	94.8		December.....	101.3	98.5
October.....	94.8				
November.....	94.8		1939		
December.....	108.9		January.....	101.3	98.8
			February.....	101.3	100.0
1937			March.....	101.3	100.0
January.....	108.9		April.....	100.0	100.0
February.....	108.9		May.....	100.0	100.0
March.....	108.9	108.1	June.....	100.0	100.0
April.....	117.8	108.1	July.....	100.0	100.0
May.....	117.8	108.1	August.....	100.0	100.0
June.....	117.8	108.1	September.....	100.0	100.0
July.....	117.8	108.1			

Specification: Boilers, range, 30-gallon, standard galvanized, electric weld, 85-pound working pressure; each.

Wholesale: Manufacturer's list with discounts, manufacturer to jobber, f. o. b. cars destination.

Retail: Distributor to plumbing contractor, delivered to job site, city.

TABLE 226.—Range boilers

REGION V. SOUTH ATLANTIC

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....		99.8	June.....	117.8	101.3
February.....		99.8	July.....	117.8	101.3
March.....		99.8	August.....	117.8	101.3
April.....		99.8	September.....	117.8	101.3
May.....	86.1	99.8	October.....	117.8	101.3
June.....	86.1	99.8	November.....	117.8	101.3
July.....	86.1	99.8	December.....	117.8	101.3
August.....	86.1	99.8			
September.....	86.1	99.8	1938		
October.....	86.1	99.8	January.....	117.8	101.3
November.....	86.1	99.8	February.....	117.8	101.3
December.....	86.1	99.8	March.....	101.3	101.3
1936			April.....	101.3	101.3
January.....	86.1	99.8	May.....	101.3	101.3
February.....	86.1	99.8	June.....	101.3	101.3
March.....	86.1	99.8	July.....	101.3	101.3
April.....	86.1	99.8	August.....	101.3	101.3
May.....	86.1	99.8	September.....	101.3	101.3
June.....	86.1	99.8	October.....	101.3	101.3
July.....	86.1	99.8	November.....	101.3	101.3
August.....	86.1	99.8	December.....	101.3	101.3
September.....	94.8	99.8			
October.....	94.8	99.8	1939		
November.....	94.8	99.8	January.....	101.3	100.0
December.....	108.9	99.8	February.....	101.3	100.6
1937			March.....	101.3	100.6
January.....	108.9	99.8	April.....	100.0	100.6
February.....	108.9	99.8	May.....	100.0	100.0
March.....	108.9	99.8	June.....	100.0	100.0
April.....	117.8	101.3	July.....	100.0	100.0
May.....	117.8	101.3	August.....	100.0	100.0
			September.....	100.0	100.0

Specification: Boilers, range, 30-gallon, standard galvanized, electric weld, 85-pound working pressure; each.

Wholesale: Manufacturer's list with discounts, manufacturer to jobber, f. o. b. cars destination.

Retail: Distributor to plumbing contractor, delivered to job site, city.

TABLE 227.—*Range boilers*

REGION VI. EAST SOUTH CENTRAL

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
May.....	86.1	-----	August.....	117.8	-----
June.....	86.1	-----	September.....	117.8	-----
July.....	86.1	-----	October.....	117.8	-----
August.....	86.1	-----	November.....	117.8	-----
September.....	86.1	-----	December.....	117.8	-----
October.....	86.1	-----			
November.....	86.1	-----	1938		
December.....	86.1	-----	January.....	117.8	-----
1936			February.....	117.8	-----
January.....	86.1	-----	March.....	101.3	-----
February.....	86.1	-----	April.....	101.3	-----
March.....	86.1	-----	May.....	101.3	-----
April.....	86.1	-----	June.....	101.3	-----
May.....	86.1	-----	July.....	101.3	-----
June.....	86.1	-----	August.....	101.3	-----
July.....	86.1	-----	September.....	101.3	-----
August.....	86.1	-----	October.....	101.3	-----
September.....	94.8	-----	November.....	101.3	-----
October.....	94.8	-----	December.....	101.3	-----
November.....	94.8	-----			
December.....	108.9	-----	1939		
1937			January.....	101.3	100.0
January.....	108.9	-----	February.....	101.3	100.0
February.....	108.9	-----	March.....	101.3	100.0
March.....	108.9	-----	April.....	100.0	100.0
April.....	117.8	-----	May.....	100.0	100.0
May.....	117.8	-----	June.....	100.0	100.0
June.....	117.8	-----	July.....	100.0	100.0
July.....	117.8	-----	August.....	100.0	100.0
			September.....	100.0	100.0

Specification: Boilers, range, 30-gallon, standard galvanized, electric weld, 85-pound working pressure; each.

Wholesale: Manufacturer's list with discounts, manufacturer to jobber, f. o. b. cars destination.

Retail: Distributor to plumbing contractor, delivered to job site, city.

TABLE 228.—*Range boilers*

REGION VII. WEST SOUTH CENTRAL

[Wholesale and retail price indexes—July–September 1939 = 100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....		99.7	June.....	135.3	100.3
February.....		99.7	July.....	135.3	100.3
March.....		99.7	August.....	135.3	100.3
April.....		99.7	September.....	135.3	100.3
May.....	86.6	99.7	October.....	135.3	100.3
June.....	86.6	99.7	November.....	135.3	100.3
July.....	86.6	99.7	December.....	135.3	100.3
August.....	86.6	99.7			
September.....	86.6	99.7	1938		
October.....	86.6	99.7	January.....	135.3	100.3
November.....	86.6	99.7	February.....	135.3	100.3
December.....	86.6	99.7	March.....	101.2	100.3
1936			April.....	101.2	100.3
January.....	86.6	99.7	May.....	101.2	100.3
February.....	86.6	99.7	June.....	101.2	100.3
March.....	86.6	99.7	July.....	101.2	100.3
April.....	86.6	99.7	August.....	101.2	100.3
May.....	86.6	99.7	September.....	101.2	100.3
June.....	86.6	99.7	October.....	103.0	100.3
July.....	86.6	99.7	November.....	103.0	100.3
August.....	86.6	99.7	December.....	103.0	100.3
September.....	95.0	99.7			
October.....	95.0	99.7	1939		
November.....	95.0	99.7	January.....	103.0	100.3
December.....	108.6	99.7	February.....	103.0	100.3
1937			March.....	103.0	100.2
January.....	108.6	99.7	April.....	100.0	100.0
February.....	108.6	99.7	May.....	100.0	100.0
March.....	108.6	99.7	June.....	100.0	100.0
April.....	135.3	99.7	July.....	100.0	100.0
May.....	135.3	100.3	August.....	100.0	100.0
			September.....	100.0	100.0

Specification: Boilers, range, 30-gallon, standard galvanized, electric weld, 85-pound working pressure; each.

Wholesale: Manufacturer's list with discounts, manufacturer to jobber, f. o. b. cars destination.

Retail: Distributor to plumbing contractor, delivered to job site, city.

TABLE 229.—*Range boilers*

REGION VIII. ROCKY MOUNTAIN

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....		101.6	June.....	150.6	104.3
February.....		101.9	July.....	150.6	104.3
March.....		101.9	August.....	150.6	104.3
April.....		101.9	September.....	150.6	104.3
May.....	86.8	101.9	October.....	150.6	104.3
June.....	86.8	101.9	November.....	150.6	104.3
July.....	86.8	101.9	December.....	150.6	104.3
August.....	86.8	101.9			
September.....	87.5	101.9	1938		
October.....	87.5	101.9	January.....	150.6	102.8
November.....	87.5	101.9	February.....	150.6	102.6
December.....	87.5	101.9	March.....	101.2	99.8
			April.....	101.2	99.8
1936			May.....	101.2	99.8
January.....	87.5	103.5	June.....	101.2	99.8
February.....	87.5	103.5	July.....	101.2	99.2
March.....	87.5	103.5	August.....	101.2	99.2
April.....	87.5	100.6	September.....	101.2	99.2
May.....	87.5	100.6	October.....	103.5	99.2
June.....	87.5	100.6	November.....	103.5	99.2
July.....	87.5	100.6	December.....	103.5	99.2
August.....	87.5	100.6			
September.....	95.0	100.6	1939		
October.....	95.0	100.6	January.....	103.5	99.2
November.....	95.0	100.6	February.....	103.5	99.2
December.....	108.5	100.6	March.....	103.5	98.6
			April.....	100.0	100.0
1937			May.....	100.0	100.0
January.....	108.5	104.0	June.....	100.0	100.0
February.....	108.5	104.0	July.....	100.0	100.0
March.....	108.5	104.0	August.....	100.0	100.0
April.....	150.6	104.3	September.....	100.0	100.0
May.....	150.6	104.3			

Specification: Boilers, range, 30-gallon, standard galvanized, electric weld, 85-pound working pressure; each.

Wholesale: Manufacturer's list with discounts, manufacturer to jobber, f. o. b. cars' destination.

Retail: Distributor to plumbing contractor, delivered to job site, city.

CHAPTER XXI

PLUMBING SUPPLIES

DESCRIPTION AND LOCATION OF THE INDUSTRY

The plumbers' supplies industry includes those establishments whose principal products are enameled-iron sanitary ware (bathtubs, sinks, lavatories, etc.), plumbers' brass goods (faucets, spigots, valves, fittings, etc.), range boilers, and other miscellaneous fixtures and fittings used by plumbers. Closely allied with these industries are the manufacturers of vitreous china and semivitreous or porcelain (all-clay) sanitary ware, such as closet bowls, flush tanks, lavatories, etc., for assembly into complete bathroom fixtures. Faucets, spigots, valves, fittings, etc., are made to a considerable extent by metal-working establishments.

The production of plumbers' supplies in 1937 was valued at approximately \$130,000,000, representing an increase of 145 percent from 1933 when the value was only \$53,000,000. Of the 1937 total, plumbers' supplies, excluding pipe and vitreous-china sanitary ware, accounted for \$103,000,000, vitreous-china plumbing fixtures, exclusive of fittings, \$20,000,000, and other plumbers' supplies and miscellaneous items, approximately \$7,000,000.

Plumbers' supplies, exclusive of pipe and vitreous-china sanitary ware, increased in value from \$42,000,000 in 1933 to \$103,000,000 in 1937, or 145 percent, while the value of vitreous-china sanitary ware rose from \$8,000,000 to \$20,000,000, or 150 percent, during the same period. Other products also increased in value, from approximately \$3,000,000 in 1933 to approximately \$7,000,000 in 1937, an increase of 133 percent.

In 1929, 255 plants were producing plumbers' supplies, the number declining to 232 in 1932 and rising to 241 in 1937. Pottery, including porcelain ware, was manufactured by 231 firms in 1933 and by 251 firms in 1937. However, when production of establishments is classified according to the major product, 28 establishments reported the production of 98 percent of the value of vitreous-china plumbing fixtures.

The plants manufacturing plumbers' supplies in 1937 were scattered over 27 States. Map XIII shows the geographical location of centers of the industry. With the exception of California, production is centered north of the Ohio River and east of the Mississippi River. Table 230 shows the value of products, by States, for the plumbers' supplies industry.

TABLE 230.—*Distribution of the manufacture of plumbing supplies, 1937*

State	Production		State	Production	
	Value	Percent of total		Value	Percent of total
Wisconsin.....	\$14,867,968	13	New Jersey.....	\$6,144,047	5
Pennsylvania.....	14,678,499	13	New York.....	5,770,528	5
Ohio.....	11,139,864	10	Massachusetts.....	4,487,846	4
Illinois.....	10,069,812	9	Other States (18) ¹	30,305,446	26
Michigan.....	8,615,205	8			
California.....	7,840,834	7	United States.....	113,920,049	100

¹ Includes Alabama, Connecticut, Delaware, Indiana, Iowa, Kansas, Kentucky, Maine, Maryland, Minnesota, Missouri, New Hampshire, Oregon, Rhode Island, Tennessee, Texas, Virginia, and Washington.

Source: Census of Manufacturers, 1937: "Plumbers' supplies, not including pipe or vitreous-china sanitary ware," table 2, p. 954.

Production and value of vitreous-china sanitary ware, by States, are not available from census data. The production and value of pottery, including vitreous-china sanitary ware, are, however, available and show that in 1937 eight States produced 85 percent of the value of all pottery and porcelain ware and, as in the case of other plumbers' supplies, the production area, except for California, is north of the Ohio River and east of the Mississippi River.

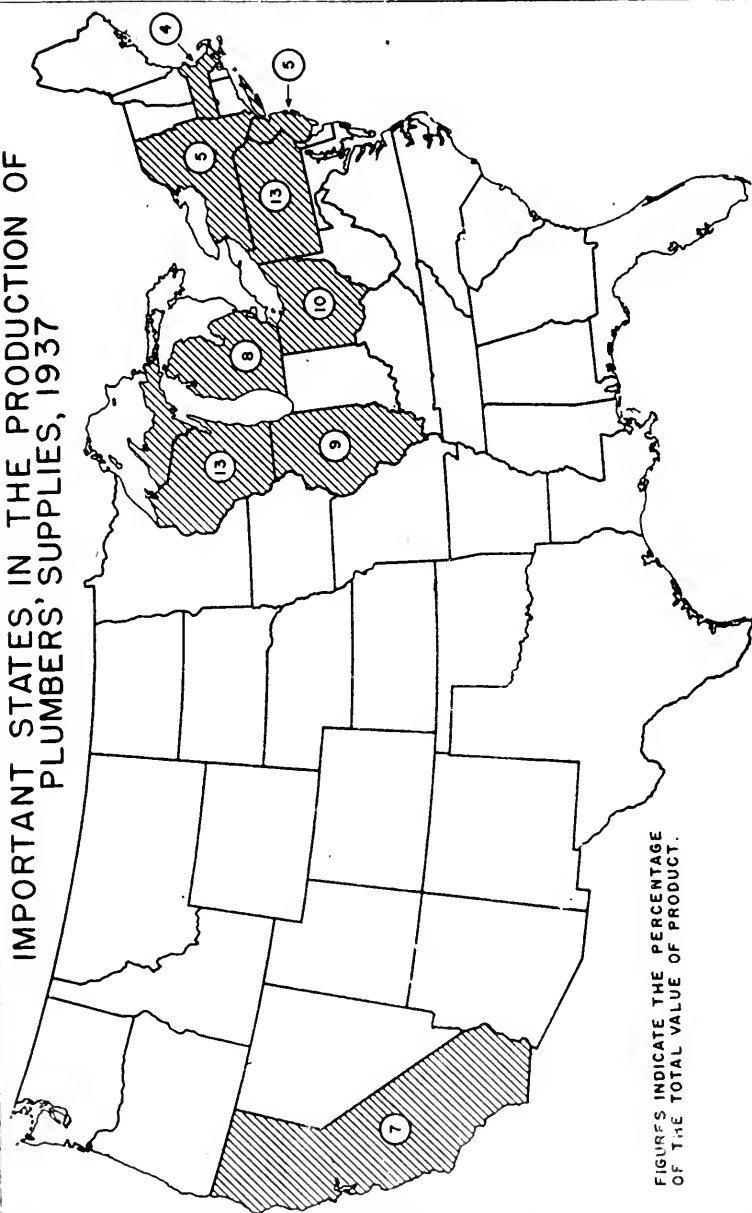
The number of companies engaged in the production of plumbers' supplies and equipment is relatively small for most items. The degree to which production is concentrated in a few large companies varies with the product. The following table shows the items priced and the percentages manufactured by the four leading firms, according to data obtained from the Department of Commerce:

Product	Percentage of total produced by 4 leading companies	Product	Percentage of total produced by 4 leading companies
Closet.....	61	Sink.....	64
Lavatory.....	69	Bathtub.....	73

In the plumbing equipment lines there is a considerable variation in products designed for the same use. For certain items, either porcelain or vitreous china and enameled iron fixtures are used; for others enameled iron alone or porcelain and vitreous china alone are customarily used; while enameled sheet steel products are also popular. For example, closet bowls are primarily vitreous china, while lavatories may be either enameled iron or vitreous china, and bathtubs are almost always enameled iron.

MAP XIII

IMPORTANT STATES IN THE PRODUCTION OF PLUMBERS' SUPPLIES, 1937



FIGURES INDICATE THE PERCENTAGE
OF THE TOTAL VALUE OF PRODUCT.

The production of plumbing equipment in 1937, by types of materials, is as follows:

Product	Vitreous china		Enameled iron	
	Number	Value	Number	Value
Closets:				
Bowls.....	1, 388, 203	\$6, 720, 637		
Tanks.....	1, 182, 489	5, 259, 228	21, 236	\$173, 500
Lavatories.....	269, 384	3, 128, 462	943, 840	6, 065, 17
Sinks.....			1, 057, 647	9, 564, 563
Bathtubs.....			712, 134	15, 731, 811

In addition to the above, semivitreous or porcelain (all-clay) plumbing fixtures valued at \$477,011 were produced in 1937. In this group are included laundry tubs, sinks, closet bowls and flush tanks, lavatories, bathtubs, and other semivitreous fixtures.

Specifications.

For the purpose of this study the following items were specified:

Closets: Combination, vitreous-china, two-piece, close-coupled, siphon action, round front with low tank, complete with chromium-plated fittings, white sheet covered seat and cover, china bolt caps, chromium-plated stop in supply.

Lavatories: Enameled iron, 20 by 18 inches, apron front, wall hung, separate compression faucets with plug, chain, and stopper, stop in supply, P-trap, all exposed brass chromium-plated.

Sinks: Enameled iron, 42 by 20 inches, roll rim, combination double faucet, strainer, P-trap.

Bathtubs: 5-foot enameled cast iron, recess tub with apron front, complete with tub and shower fittings with transfer valve, 1½-inch connected drain and overflow.

Price data at wholesale were gathered on these items in accordance with the following specifications: Each, manufacturer's list with discounts, manufacturer to jobber, f. o. b. cars, jobbers' stocks.

The retail specifications were: Each, distributor to plumbing contractor, delivered to job site, city.¹

Channels of Distribution.

As in the case of heating boilers and radiation, plumbing equipment and supplies are generally sold by the manufacturer to the jobber, and by the jobber to the plumber or contractor. The contractor in turn installs the equipment. Most consumer purchases are made through the plumbing contractor or master plumber, the one major exception being purchases from mail-order houses and chain stores. In some localities health and other ordinances have been so drawn as to make it almost impossible for equipment from mail-order houses to meet requirements as to fixtures and installation. In some cities, master plumber associations have blacklisted mail-order fixtures.

Several of the larger producers of plumbing supplies and fixtures maintain company-owned wholesale outlets in large cities throughout the United States and sell through these as well as through independent wholesalers and jobbers. Some companies sell exclusively

¹ The industry classifies these prices as "wholesale," but for purposes of this study they are defined as "retail."

through independent wholesalers and jobbers and may or may not operate company-owned display rooms. Many companies sell to chain-store organizations and mail-order houses.

PRICE STRUCTURE

List Prices and Discounts.

Manufacturers usually establish a list price which is uniform throughout the United States. Sales to jobbers and wholesalers are made at a discount off the list price—usually 20 percent. Other allowances are given by some companies, particularly on sales of fixtures to jobbers and wholesalers for display use. These usually take the form of an additional discount, but sales on this basis are very small in volume.

The prevailing cash discount in the industry is 2 percent, the exact discount provision varying with the company. One company allows 2 percent for payment by the 15th of the month following shipment, and net 30 days after discount date. Another allows 2 percent for payment the 25th instant or 10th proximo following shipment, depending on whether shipment was made between the 1st and 15th of the month, or 15th to end of month. Still another allows this discount on payment 10 days after billing and shipment.

Freight Allowances.

Carlot sales of plumbing equipment are generally made on an f. o. b. plant basis with carlot freight allowed. On less-than-carlot orders, carlot freight is allowed and the buyer must absorb the difference. Delivery is made ordinarily to the warehouse of the jobber who must bear delivery costs to the contractor or plumber.

Terms and Conditions of Sale.

Information as to terms and conditions of sales as practiced by certain of the large producers is discussed hereafter. They are not necessarily followed by all producers, but are indicative of the trade practices of this industry.

Orders for plumbing fixtures and fittings for specific building projects are accepted only for shipment within 6 months from date of order. A specific building project is defined by the industry as one requiring 50 or more complete plumbing units in white, or 12 or more complete units in color. Such specific building projects may cover either new or remodeling jobs. Orders for individual houses or private residences are not considered specific building projects unless they are sufficiently large to qualify under the requirements outlined in this paragraph. Fixtures for speculative housing developments are normally supplied from wholesalers' stock.

Wholesalers who have taken contracts for housing operations at a definite price register them at the time of acceptance. If prices advance, a period of 30 days is allowed for withdrawal of such orders.

In the event of any future price advance, only those stock orders are accepted at the old basis which are already on hand or which bear postmarks indicating that they were already in transit on the effective date of the advance. When a price advance occurs, a period of 15 days is allowed for wholesalers to get actual orders covering any jobs on which they have quoted figures based on the old price.

In the event of a decline in prices, no provision is made for rebates on goods in customers' stocks, credit being granted only on goods in transit at the time of the decline.

PRICE LEVELS AND TRENDS

The wholesale price of each of the various plumbing items, in carlots, does not vary geographically since full freight is allowed on such shipments. Wholesale prices do vary, however, on less-than-carlot shipments as only the carlot freight is allowed.

Retail prices as established in the manufacturers' list do not vary geographically but actual sales may be made at less than the list quotation, depending on the local market situation. Comparable price data for plumbing fixtures were difficult to obtain, particularly from retail dealers, because of the method of determining the sales price. The reporter computed the price of the complete fixture by taking the price of the basic fixture, without fittings, and adding thereto the prices of the various fittings. It was, therefore, difficult to secure data on identical fixtures and fittings due to the varying grades of materials and types of fittings which might be added to a basic fixture. In addition, the grade and type of fitting varied with the section of the country in which the price was quoted.²

COMBINATION CLOSETS

In September 1939, the typical price for the type of water-closet specified in this study was \$20.60. The dealer, or distributor, purchased this product for \$16.48, a spread of \$4.12, or 25 percent. Prices are available only from 1937 to September 1939 for water-closets and during this period the trend was upward. The index number representing this series, which has as its base the average of prices in the third quarter of 1939, was 94 in January 1937. (See chart XXVIII and table 231.) This held for 1 month. The price then moved up 2 percent and in August 1937 a further upswing occurred which carried the index to 98. This level was maintained until August 1938 when there was a decline to 95. After 5 months, the index again rose in February 1939—this time to 100 percent of the average in the third quarter of 1939. This level was still in effect when this survey was made.

LAVATORIES

In September 1939, the typical price of enameled iron lavatories at wholesale was \$11.62 and at retail \$14.53. The spread between wholesale and retail prices was 25 percent.

The level of prices for lavatories has been fairly steady since 1935, with only two major deviations from the 1939 level. (See chart XXIX and table 232.) On the basis of the average price in the third quarter of 1939 as 100, the index number for January 1935 was 97. After a drop to 93 in the first half of the year, the index rose in July to 96 where it was maintained for the remainder of the year. In January 1936, it advanced to a point slightly under the level of late 1939 and remained stationary for the year. In February 1937, a series of price

² The index numbers for combination closets, lavatories, sinks, and bathtubs are identical for all regions because the wholesale and retail prices are in a consistent ratio.

changes began which by April had raised the index to approximately 109. This level was maintained for 4 months, but in August, price revisions brought the level down 2 percent where it remained for the next 4 months. There was a slight decline in January 1938 and this was followed by decreases of 4 percent in March and of 3 percent in June, bringing the index to 98. Price increases of approximately 1 percent in September 1938 and in February 1939 carried the index to the base period level.

SINKS

In September 1939, the typical wholesale price of the type of sink included in the survey was \$15.04. The retail list price to consumers, established by the manufacturer on the item, was \$18.80. The spread, as in the case of other plumbing products, was 25 percent.

Price trends for sinks show a larger degree of movement than some of the plumbing products, but the general upward trend prevailed with a "low" in 1935 and a "peak" in 1937, followed by a tendency to hold to the level established in early 1938. (See chart XXX and table 233.)

In January 1935, the index number (based on prices in third quarter of 1939 = 100) for this series was 88. After a 4-percent decline in the first half of the year, an upswing began which in 3 years carried the index to its peak of 110 in April 1937. There was only slight change from that time until January 1938, when, in line with the trend of other consumers' goods, the price of sinks began to decline rapidly. The index dropped 9 percent from December 1937 to May 1938, then rose 2 percent from that time to September 1939.

BATHTUBS

The consumers' list price for the type of bathtub specified in this survey was \$51.60. The distributor received a 20 percent reduction, the wholesale price being, therefore, \$41.28.

The price trend since 1935 is similar to that for other plumbing supplies, or a rise from 1935 to 1937, a decline in the early months of 1938, and stability throughout most of 1938 and all of 1939. (See chart XXXI and table 234.) The Bureau's new price index for both wholesale and retail prices (based on prices in the third quarter of 1939=100) which had been 85 in January and February 1935 advanced 17 percent to 99 in January 1936. The index was stable until February 1937, when further increases were initiated which carried it to 104 by August. There was little change until February 1938, when the index dropped to the base period level, which was maintained through 1939.

In considering the trends of prices for plumbing items as a group, two facts are apparent:

1. Prices for January 1935 were on the whole lower than in 1939 and the movement was generally upward. There was usually a marked peak in prices in 1937, followed by a decline in 1938 and a maintenance of the 1938 prices through 1939.

2. Price changes for these items are fairly infrequent and the price set for January or February of any year quite often holds for the entire year.

CHART XXVIII
COMBINATION CLOSETS
WHOLESALE AND RETAIL PRICE INDEXES
JULY - SEPTEMBER 1939 = 100

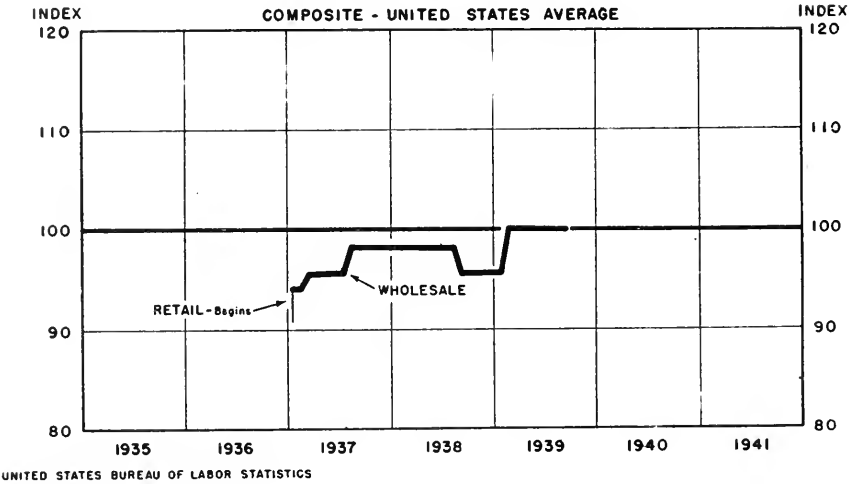


CHART XXIX
ENAMELED IRON LAVATORIES
WHOLESALE AND RETAIL PRICE INDEXES
JULY - SEPTEMBER 1939 = 100

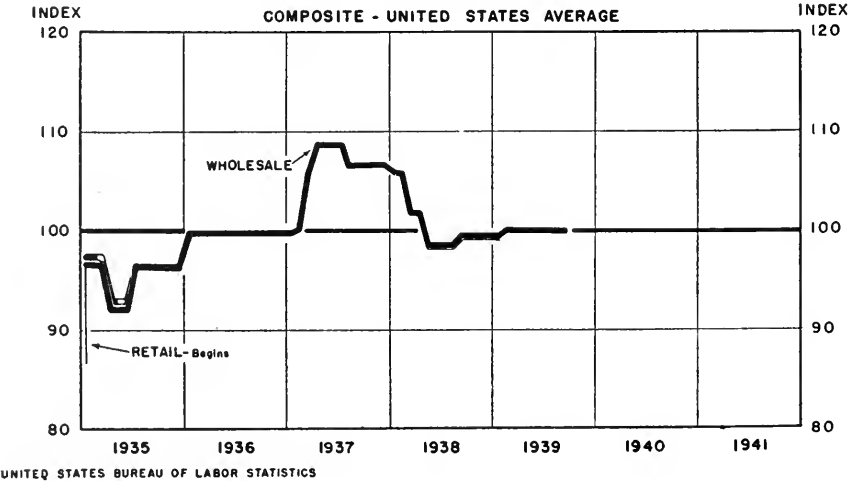


CHART XXX

ENAMELED IRON SINKS WHOLESALE AND RETAIL PRICE INDEXES

JULY - SEPTEMBER 1939 = 100

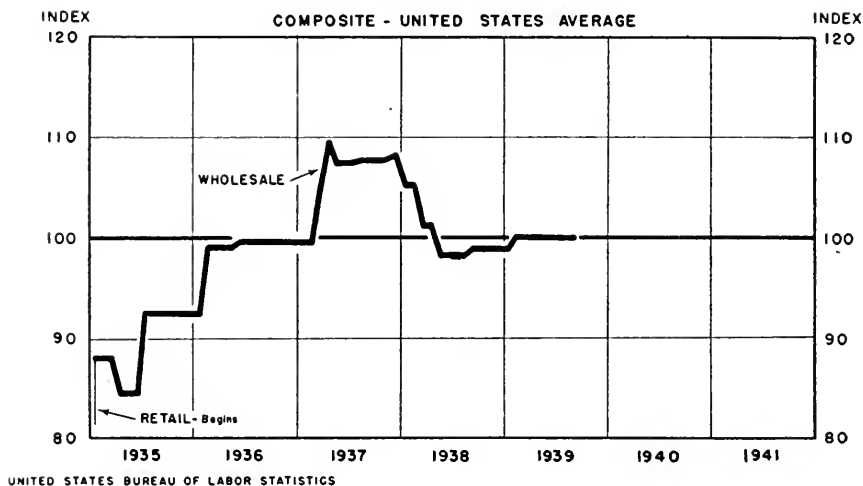


CHART XXXI

ENAMELED IRON BATH TUBS WHOLESALE AND RETAIL PRICE INDEXES

JULY - SEPTEMBER 1939 = 100

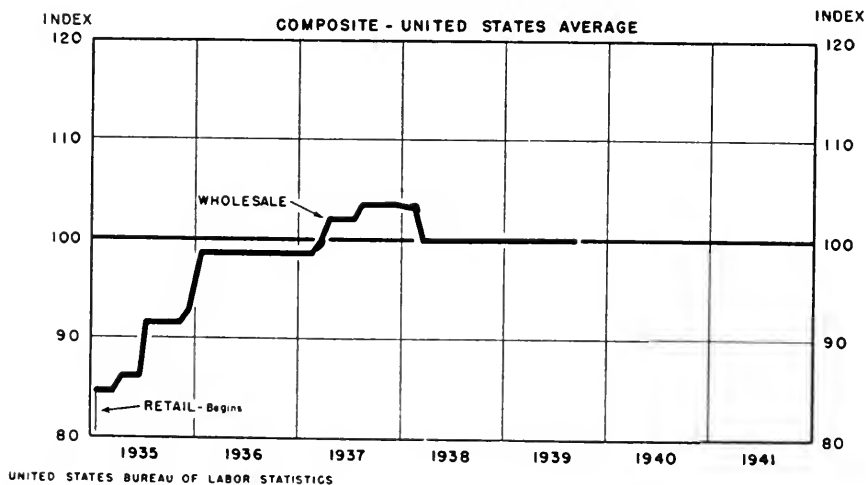


TABLE 231.—*Combination closets*

COMPOSITE UNITED STATES AVERAGE

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....			June.....	95.6	95.6
February.....			July.....	95.6	95.6
March.....			August.....	98.1	98.1
April.....			September.....	98.1	98.1
May.....			October.....	98.1	98.1
June.....			November.....	98.1	98.1
July.....			December.....	98.1	98.1
August.....					
September.....			1938		
October.....			January.....	98.1	98.1
November.....			February.....	98.1	98.1
December.....			March.....	98.1	98.1
1936			April.....	98.1	98.1
January.....			May.....	98.1	98.1
February.....			June.....	98.1	98.1
March.....			July.....	98.1	98.1
April.....			August.....	98.1	98.1
May.....			September.....	95.6	95.6
June.....			October.....	95.6	95.6
July.....			November.....	95.6	95.6
August.....			December.....	95.6	95.6
September.....					
October.....			1939		
November.....			January.....	95.6	95.6
December.....			February.....	100.0	100.0
1937			March.....	100.0	100.0
January.....	94.2	94.2	April.....	100.0	100.0
February.....	94.2	94.2	May.....	100.0	100.0
March.....	95.6	95.6	June.....	100.0	100.0
April.....	95.6	95.6	July.....	100.0	100.0
May.....	95.6	95.6	August.....	100.0	100.0
			September.....	100.0	100.0

Specification: Closet, combination, vitreous china, 2-piece, close coupled, syphon action, round front with low tank, complete with chromium plated fittings, white sheet covered seat and cover, china bolt caps, chromium plated stop in supply; each.

Wholesale: Manufacturer's list with discounts, manufacturer to jobber, f. o. b. cars destination.

Retail: Distributor to plumbing contractor, delivered to job site, city.

TABLE 232.—*Enameled iron lavatories*

COMPOSITE UNITED STATES AVERAGE

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole- sale	Retail		Whole- sale	Retail
1935			1937—Continued		
January.....	97.4	97.4	June.....	108.6	108.6
February.....	97.4	97.4	July.....	108.6	108.6
March.....	97.4	97.4	August.....	106.7	106.7
April.....	92.9	92.9	September.....	106.7	106.7
May.....	92.9	92.9	October.....	106.7	106.7
June.....	92.9	92.9	November.....	106.7	106.7
July.....	96.4	96.4	December.....	106.7	106.7
August.....	96.4	96.4			
September.....	96.4	96.4	1938		
October.....	96.4	96.4	January.....	105.9	105.9
November.....	96.4	96.4	February.....	105.9	105.9
December.....	96.4	96.4	March.....	101.9	101.9
1936			April.....	101.9	101.9
January.....	99.8	99.8	May.....	98.5	98.4
February.....	99.8	99.8	June.....	98.5	98.4
March.....	99.8	99.8	July.....	98.5	98.4
April.....	99.8	99.8	August.....	98.5	98.4
May.....	99.8	99.8	September.....	99.5	99.4
June.....	99.8	99.8	October.....	99.5	99.4
July.....	99.8	99.8	November.....	99.5	99.4
August.....	99.8	99.8	December.....	99.5	99.4
September.....	99.8	99.8			
October.....	99.8	99.8	1939		
November.....	99.8	99.8	January.....	99.5	99.4
December.....	99.8	99.8	February.....	100.0	100.0
1937			March.....	100.0	100.0
January.....	99.8	99.8	April.....	100.0	100.0
February.....	100.2	100.1	May.....	100.0	100.0
March.....	105.9	105.9	June.....	100.0	100.0
April.....	108.6	108.6	July.....	100.0	100.0
May.....	108.6	108.6	August.....	100.0	100.0
			September.....	100.0	100.0

Specification: Lavatories, enameled iron, 20 by 18 inches, apron front, wall hung, separate compression faucets with plug, chain and stopper, stop in supply, P-trap, all exposed brass chromium plated; each.

Wholesale: Manufacturer's list with discounts, manufacturer to jobber, f. o. b. cars destination.

Retail: Distributor to plumbing contractor, delivered to job site, city.

TABLE 233.—*Enameled iron sinks*

COMPOSITE UNITED STATES AVERAGE

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	88.0	88.0	June.....	107.4	107.4
February.....	88.0	88.0	July.....	107.4	107.4
March.....	88.0	88.0	August.....	107.7	107.7
April.....	84.5	84.5	September.....	107.7	107.7
May.....	84.5	84.5	October.....	107.7	107.7
June.....	84.5	84.5	November.....	107.7	107.7
July.....	92.5	92.5	December.....	108.2	108.2
August.....	92.5	92.5	1938		
September.....	92.5	92.5	January.....	105.3	105.3
October.....	92.5	92.5	February.....	105.3	105.3
November.....	92.5	92.5	March.....	101.1	101.1
December.....	92.5	92.5	April.....	101.1	101.1
1936			May.....	98.1	98.1
January.....	92.5	92.5	June.....	98.1	98.1
February.....	99.1	99.1	July.....	98.2	98.1
March.....	99.1	99.1	August.....	98.1	98.1
April.....	99.1	99.1	September.....	98.9	98.9
May.....	99.1	99.1	October.....	98.9	98.9
June.....	99.6	99.6	November.....	98.9	98.9
July.....	99.6	99.6	December.....	98.9	98.9
August.....	99.6	99.6	1939		
September.....	99.6	99.6	January.....	98.9	98.9
October.....	99.6	99.6	February.....	100.0	100.0
November.....	99.6	99.6	March.....	100.0	100.0
December.....	99.6	99.6	April.....	100.0	100.0
1937			May.....	100.0	100.0
January.....	99.6	99.6	June.....	100.0	100.0
February.....	99.6	99.6	July.....	100.0	100.0
March.....	104.5	104.5	August.....	100.0	100.0
April.....	109.5	109.5	September.....	100.0	100.0
May.....	107.4	107.4			

Specifications: Sinks, enameled iron, 42 by 20 inches, roll rim, combination double faucet, strainer, P trap; each.

Wholesale: Manufacturer's list with discounts, manufacturer to jobber, f. o. b. cars destination.

Retail: Distributor to plumbing contractor, delivered to job site, city.

TABLE 234.—*Enameled iron bathtubs*
COMPOSITE UNITED STATES AVERAGE

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	84.7	84.7	June.....	102.2	102.2
February.....	84.7	84.7	July.....	102.2	102.2
March.....	84.7	84.7	August.....	103.6	103.6
April.....	86.3	86.3	September.....	103.6	103.6
May.....	86.3	86.3	October.....	103.6	103.6
June.....	86.3	86.3	November.....	103.6	103.6
July.....	91.7	91.7	December.....	103.6	103.6
August.....	91.7	91.7	1938		
September.....	91.7	91.7	January.....	103.4	103.4
October.....	91.7	91.7	February.....	103.3	103.4
November.....	91.7	91.7	March.....	100.0	100.0
December.....	92.8	92.9	April.....	100.0	100.0
1936			May.....	100.0	100.0
January.....	98.7	98.7	June.....	100.0	100.0
February.....	98.7	98.7	July.....	100.0	100.0
March.....	98.7	98.7	August.....	100.0	100.0
April.....	98.7	98.7	September.....	100.0	100.0
May.....	98.7	98.7	October.....	100.0	100.0
June.....	98.7	98.7	November.....	100.0	100.0
July.....	98.7	98.7	December.....	100.0	100.0
August.....	98.7	98.7	1939		
September.....	98.7	98.7	January.....	100.0	100.0
October.....	98.7	98.7	February.....	100.0	100.0
November.....	98.7	98.7	March.....	100.0	100.0
December.....	98.7	98.7	April.....	100.0	100.0
1937			May.....	100.0	100.0
January.....	98.7	98.7	June.....	100.0	100.0
February.....	98.7	98.7	July.....	100.0	100.0
March.....	99.8	99.7	August.....	100.0	100.0
April.....	102.2	102.2	September.....	100.0	100.0
May.....	102.2	102.2			

Specification: Tubs, bath, 5 feet, enameled cast iron, recess tub with apron front, complete with tub and shower fittings with transfer valve, 1½ inches connected drain and overflow, 5 feet chromium plated rod with 8 ounce white duck curtain and pins; each.

Wholesale: Manufacturer's list with discounts, manufacturer to jobber, f. o. b. cars destination.

Retail: Distributor to plumbing contractor, delivered to job site, city.

CHAPTER XXII

STRUCTURAL CLAY PRODUCTS

DESCRIPTION AND LOCATION OF THE INDUSTRY

Structural clay products are included in the Census of Manufactures as a part of the "Clay Products, other than Pottery," industry. This industry had a production valued at \$163,000,000 in 1937 and \$298,000,000 in 1929, according to data published by the Bureau of the Census. For the purposes of this study prices were collected for the following products: Common brick, face brick, hollow building tile, floor tile, and sewer pipe. The importance of each of these products in relation to the industry as a whole is shown below:

TABLE 235.—*Importance in industry of specified structural clay products*

Product	Value (000 omitted)			Percent of total value of industry in 1937
	1937	1935	1929	
Brick:				
Common.....	\$34,000	\$18,200	\$58,700	21.4
Face.....	14,350	7,000	36,120	9.0
Tile:				
Hollow building.....	9,870	5,000	19,800	6.2
Floor.....	1,750	1,000	3,770	1.1
Sewer pipe.....	13,700	8,600	21,300	8.6
Total.....	73,670	39,800	139,690	46.3
Value of clay products other than pottery.....	159,000	90,000	265,000	

Source: Census of Manufactures, 1937, The Clay Products Industries, pp. 850-852.

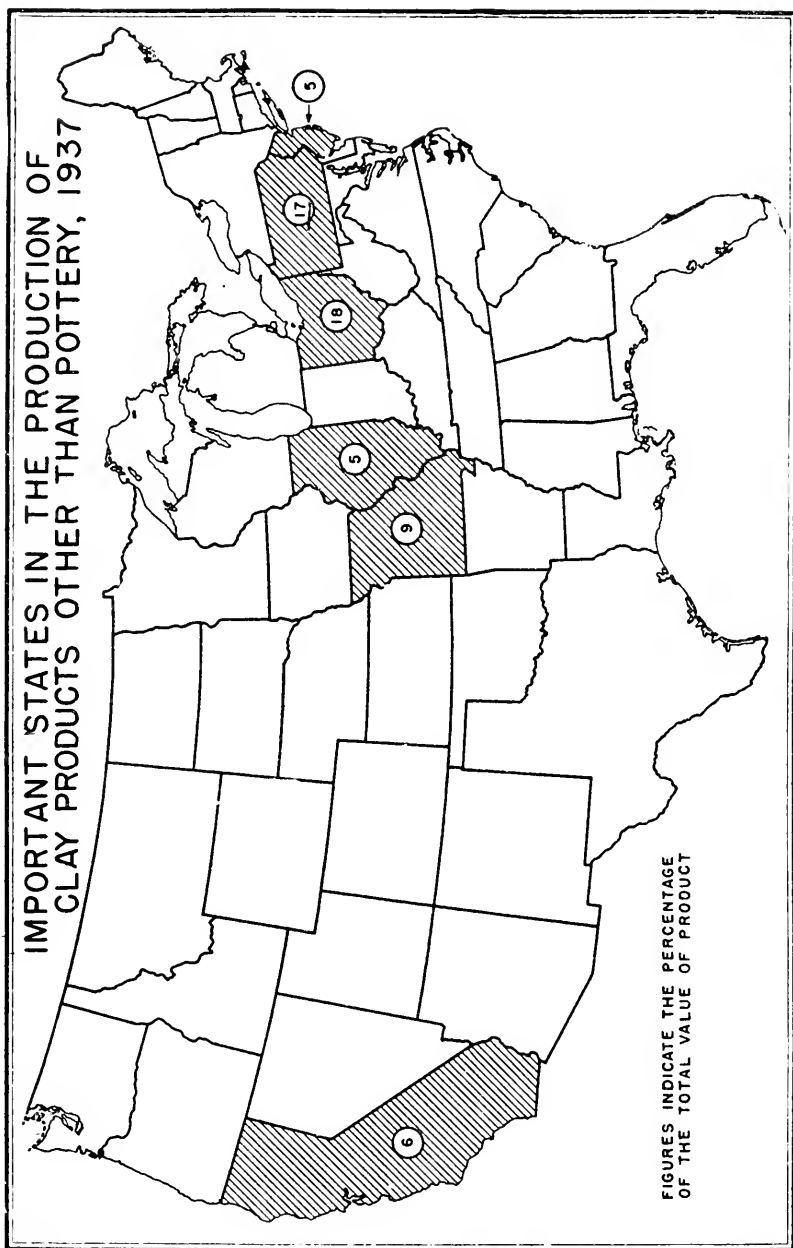
In 1937, 1,198 plants were engaged in the manufacture of clay products other than pottery; there were 888 plants in 1935 and 1,760 plants in 1929. For the industry as a whole, production was scattered throughout the 48 States, but this wide distribution does not apply to all individual products. Thus, while there are brick plants in every State, the manufacture of floor tile is concentrated in only a few States. The other products studied fall between these two extremes.

TABLE 236.—*Geographical distribution of production, structural clay products, 1937*

State	Number of plants	Value of product	Percent of total
Ohio.....	172	\$29,865,536	18
Pennsylvania.....	149	28,292,925	17
Missouri.....	41	14,383,035	9
California.....	68	10,290,778	6
Illinois.....	64	8,275,533	5
New Jersey.....	43	7,784,120	5
Other States (43).....	661	64,369,813	40
Total United States.....	1,198	163,261,740	100

Source: Census of Manufactures, 1937, The Clay Products Industries, p. 847.

MAP XIV

IMPORTANT STATES IN THE PRODUCTION OF
CLAY PRODUCTS OTHER THAN POTTERY, 1937FIGURES INDICATE THE PERCENTAGE
OF THE TOTAL VALUE OF PRODUCT

Map XIV shows the six States leading in the production of clay products other than pottery, which together produced 60 percent of the national total. Table 236 shows the geographical distribution of value of products of the industry.

Concentration of Ownership.

For the industry as a whole there is a wide diffusion of ownership, but the degree of concentration varies greatly for different products. Department of Commerce statistics show that the four leading companies manufacture 63 percent of floor tile, 37 percent of sewer pipe, 25 percent of building tile, 16 percent of face brick, and 7 percent of common brick. Of the five items listed, the one having the smallest total value of product has the highest degree of concentration.

Items Produced in Industry.

The chief products of this industry are brick and tile. There are, however, a great variety of articles included in this general classification. Among the various types of brick produced are common, face, hollow, salt glazed, and special brick such as vitrified or fire-clay. Tile may be for uses such as partitions, or for floors or walls, as well as for floor arching, fireproofing, roofing, and conduits. Also produced by the industry are sewer pipe, drain tile, stove and flue linings, refractory cement, and other special products.

Commodity Specifications.

The items selected for pricing, as representative of their classes, were—

- (1) Common building brick.
- (2) Standard colonial red face brick.
- (3) Hollow partition building tile, 4 inches by 12 inches by 12 inches, 3 cell, scored, approximately 16 pounds weight.
- (4) Floor tile, 1 inch hexagon, color group 1 (white, red, or gray).
- (5) Sewer pipe, 6 inches, vitrified, first quality.

PRICE STRUCTURE

Wholesale Pricing System.

Most structural clay products are sold on an f. o. b. plant basis, although sewer pipe is frequently sold on an f. o. b. destination or delivered basis.

The channels of distribution and market areas for the various structural clay products vary with the product and with the distribution of production. Transportation costs, however, limit sales areas on all these products.

The common brick branch of the industry is characterized by small scale operations, ordinarily operated by the individual owners. The market area is limited by high transportation costs and low unit value and by the further fact that the raw material is widely distributed. Most of the product is sold direct to the consumer by the producer, but sales may be made through local supply houses or dealers, in which case a discount, usually about \$1 per thousand, is granted the wholesale purchaser. Prices, both wholesale and retail, tend to be uniform within each market area.

Most producers price their common brick on an f. o. b. plant basis, with a fixed delivery charge for job site deliveries. In the larger areas

this delivery charge is on a zone basis but in smaller places the base delivery charge applies anywhere within the area served.

Production and market areas for face brick vary only slightly from those for common building brick. In a large number of the cities surveyed, however, face brick is merely a very select common brick. In areas where the local clay is suitable for making face brick, the situation is the same as for common brick. However, since all clay is not suitable for face brick production and since transportation cost is smaller in relation to unit value, face brick has a somewhat wider market range than common brick. For instance, one producer of face brick sells in the New York, Detroit, and Chicago markets and in some New England markets. Similarly face brick produced near Minneapolis sells in the Dakotas and eastern Montana.

On local transactions, the sales are usually from producer to consumer as in the case of common brick. However, where the brick is shipped outside the immediate producing area, sales are largely from producer to dealer and from dealer to consumer. In some instances, the retail dealer is, in fact, a branch house of the producer.

The price range for face brick is considerably wider than for common brick due to the wide variety, quality, and texture of the product. Prices of standard size face brick may range from a premium of \$1 per thousand over common brick to as much as \$50 to \$60 per thousand. The face brick price in this study, however, is that used in general residential construction.

The market for partition tile is broader than that for common brick but generally not as wide as the area for face brick. Sales are made from producer to dealer and from dealer to consumer, or may be made direct from the producer to contractor. Dealer discounts are generally quoted at so much per ton while retail sales are made per thousand.

Floor tile manufacturing is most highly concentrated both as to producing plants and as to area. According to members of the industry, sales are usually made direct from producer to contractor, although in some places a dealer-jobber may enter the transaction. Prices are quoted f. o. b. plant with freight equalized with competing plants on carlot orders. Packaging and shipping charges are customary in this branch of the industry and are charged to the customer as a part of the cost.

Sewer pipe is generally sold from manufacturer to dealer and from dealer to consumer, although large contracts go direct from manufacturer to consumer. The sales area is considerably wider than for any of the other products except floor tile. It is usually priced on an f. o. b. destination basis, although some plants sell on an f. o. b. plant basis and equalize freight on carlots with competing plants.

Discounts and Payment Terms.

Manufacturers' discounts and payment terms vary considerably. Discounts may be quoted in flat dollars and cents terms or may be allowed on a percentage basis.

For common building brick, the trade discount varies from 50 cents to \$1 per thousand where a flat sum is granted and from 10 to 15 percent on the plant price where a percentage is granted. The cash discount varies from 50 cents to \$1 per thousand or from 2 to 5 percent. The time allowed for receiving this cash discount is variable, also, and may be the 10th and 25th proximo, 10th proximo, or 30 days.

The face brick trade discounts range from \$1 to \$4 per thousand. There seems to be a system of relating trade discounts for face and common brick, since many companies providing a discount of \$1 per thousand for face brick offer a discount of 50 cents on common brick, or \$2 on face brick and \$1 on common brick.

Hollow building tile trade allowances, similarly, vary from \$5 to \$10 per thousand or from 2 or 3 percent to 10 percent, while cash allowances vary from 2 to 5 percent. The 2 percent cash discount is most prevalent, however, among hollow building tile producers. The cash discount date may be the 10th proximo, 10th and 25th proximo, 10 days after shipment and billing, or 30 days.

Sewer pipe cash discounts range from 2 to 5 percent, with 3 percent the most prevalent discount. In general, no trade discounts are given but there is a commission to the dealer or agent on sales made through these channels.

PRICE LEVELS AND TRENDS

Price levels and trends for the various structural clay products vary considerably. For this reason each item will be discussed individually.

COMMON BUILDING BRICK

Price Levels.

Retail prices for common building brick ranged from \$11 in one midwestern city to \$30 in a city in the Rocky Mountain area. Typical prices were distributed as follows:

Typical retail prices	Number of cities	Typical retail prices	Number of cities
Under \$13.00.....	3	\$18.00 to \$18.99.....	4
\$13.00 to \$13.99.....	7	\$19.00 to \$19.99.....	2
\$14.00 to \$14.99.....	2	\$20.00 and over.....	5
\$15.00 to \$15.99.....	12		
\$16.00 to \$16.99.....	7	Total.....	47
\$17.00 to \$17.99.....	5		

The average of typical prices and range of typical prices in September 1939 is shown by regions in the following table:

Region	Typical prices	
	Range	Average
I. New England.....	\$16.00 to \$20.00.....	\$17.67
II. Middle Atlantic.....	\$13.50 to \$15.00.....	14.50
III. East North Central.....	\$11.00 to \$18.00.....	14.95
IV. West North Central.....	\$15.10 to \$20.70.....	16.76
V. South Atlantic.....	\$12.50 to \$24.50.....	16.36
VI. East South Central.....	\$13.00 to \$15.00.....	13.88
VII. West South Central.....	\$13.50 to \$18.00.....	15.20
VIII. Rocky Mountain.....	\$12.50 to \$39.00.....	18.68
IX. Pacific.....	\$13.50 to \$19.00.....	16.67
United States.....		16.34

In regions where there is a wide spread between the high and low prices the difference is primarily accounted for by the fact that the cities reporting the highest prices do not have locally manufactured brick to supply the demand. Prices in such cities as Fargo, N. Dak.;

Miami, Fla.; and Boise, Idaho, are so affected, and the freight charge may equal or even exceed the plant price.

Price Trends. (See chart XXXII and tables 237 to 246.)

Common building brick prices have remained fairly constant since 1935, participating neither in the broad upswing of most commodities during 1935-37 nor in the subsequent downswing in 1938. The price index for the United States (based on July to September 1939=100) was 96.1 in January 1935, dropped slightly to 95.9 (the low for the period) in September 1935 and began a very gradual rise in December of that year. The rise was never greater than 1 percent at any time and changes were comparatively infrequent. By April 1939, the index reached its peak, 101.6; it then fell slightly to 99.9 in September.

Price trends by regions show little variation from the national pattern. The New England region showed almost no change from 1935 through 1936, followed by an 8 percent rise in January 1937 and by smaller rises in January and February 1938. Since February 1938 the price has remained stable. The index in the Middle Atlantic region showed little movement except for a slight rise in March 1939 and a drop to the base level in June 1939, where it has since remained.

The East North Central and South Atlantic regions followed the general price movement characteristic of the 1935-39 period more closely than the other regions. The indexes here were low in 1935, rose gradually in 1936 and early 1937, reached a peak during 1937-38, dropped in July 1938, and rose slightly in 1939, since which time the prices have remained constant. At no time were the changes very great, but the pattern of general price movement for the period of 1935-39 is apparent.

In the West North Central region peak prices were recorded during 1935 (105.4 in January), but there was very little price movement until the latter part of 1937 when a downward movement began, reaching the low for this region (99.1) in May 1938. This low price held until February 1939 when the index rose to 100.2 and remained constant until September 1939 when there was a slight drop.

The East South Central region also began the period studied with indexes above the 1939 base period (103.2 in January 1935), and held this level during 1935, 1936, and 1937, when there began a downward movement. After a slight drop in January 1938 the base period level was reached in August 1938 and remained constant thereafter.

In the West South Central region a downtrend during 1937 and early 1938 was followed by a rise in March 1938 and again in July 1938 when the base period level was reached. Since then, no change has taken place.

A slight decrease in prices in 1936, and a gain in 1937, followed by rising prices after December 1937, reaching the base level in April 1939, characterized the price movement in the Rocky Mountain area.

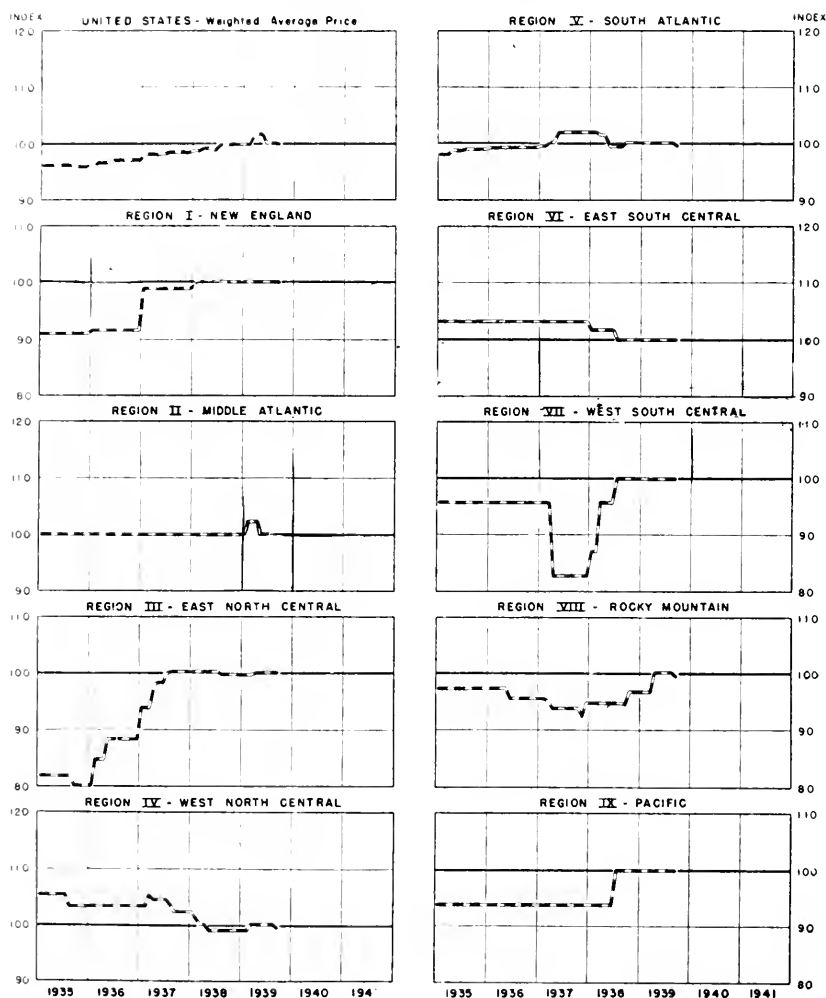
In 1935 the Pacific coast prices were low as compared with the July-September 1939 level and remained so until June 1938 when the one advance in prices for the period occurred. Thus, there has been great stability of brick prices on the coast.

FACE BRICK

Price Levels.

In September 1939 face brick prices ranged from about \$20 to over \$50 at retail. There was considerable variation among the

CHART XXXII
COMMON BRICK
 RETAIL PRICE INDEXES
 JULY - SEPTEMBER 1939 = 100



cities and regions, with higher prices more prevalent in the western areas. The range of prices and average typical prices by regions in September 1939, was as follows:

Region	Range of typical prices	Average of typical prices
I. New England.....	\$22.00 to \$36.00.....	\$27.50
II. Middle Atlantic.....	\$21.00 to \$22.00.....	21.75
III. East North Central.....	\$18.00 to \$21.00.....	19.50
IV. West North Central.....	\$17.00 to \$33.30.....	24.75
V. South Atlantic.....	\$18.00 to \$30.00.....	21.75
VI. East South Central.....	\$15.50 to \$26.00.....	20.25
VII. West South Central.....	\$24.50 to \$35.00.....	28.50
VIII. Rocky Mountain.....	\$23.50 to \$50.00.....	33.50
IX. Pacific.....	\$21.00 to \$56.55.....	33.50
United States.....		25.50

Price Trends. (See chart XXXIII and tables 247 to 256.)

As in the case of common brick, face brick prices showed very little movement during the period from 1935 to 1939, despite the fact that production was increased very greatly during the period. The retail index (based on July to September 1939=100) was 94.8 in 1935 and by a series of slight advances reached 100.4 in August 1938; it then dropped back to 100 in October 1938 and has remained practically unchanged since that date. Face brick prices apparently did not reflect the general upswing of commodity prices during late 1936 and early 1937 or the subsequent drop in 1938.

Regional prices follow the United States composite rather closely although in the West North Central, East South Central, and West South Central areas prices were slightly higher in 1935 than in the period used for general comparison, July to September 1939.

HOLLOW BUILDING TILE

Price Levels.

Building tile prices show a wide spread, both at retail and at wholesale. Typical retail prices in September 1939 varied from about \$60 per thousand in one East North Central city to about \$145 in a New England city, while wholesale prices ranged from about \$50 to over \$100 per thousand.

The range of prices within regions was considerably wider at retail than at wholesale, as was the spread between regions. In general, however, both wholesale and retail prices were consistently lower in producing areas, thus reflecting differences in transportation costs.

Price Trends. (See chart XXXIV and table 257.)

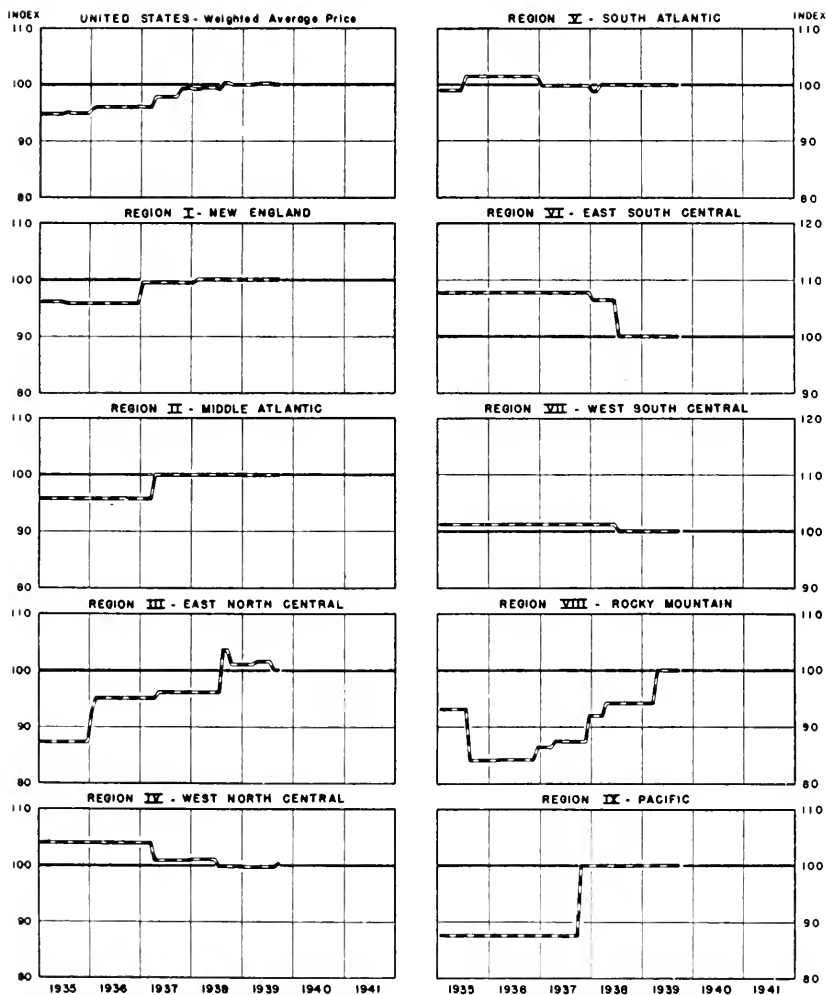
Prices of hollow building tile show practically no change during the entire 5-year period of the study, participating neither in the broad upswing of most commodity prices during 1935-1937, nor in the subsequent downswing. The United States average wholesale index (based on July to September 1939=100) moved from 99 in January 1935 to 100 by April 1939 and remained stationary thereafter. The corresponding retail index rose slowly from 99.5 in 1935 to 100.1 by January 1938 (by 3 changes) and dropped back to 100.0 in April 1939 where it remained.

CHART XXXIII

FACE BRICK

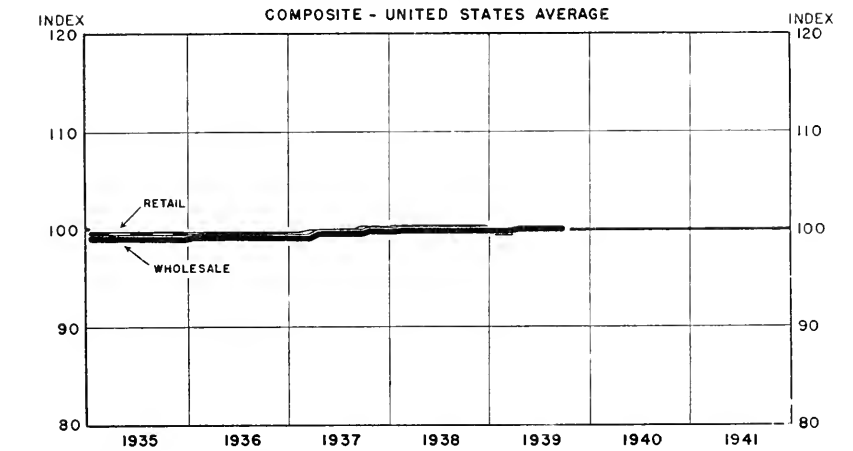
RETAIL PRICE INDEXES

JULY - SEPTEMBER 1939 = 100



The prices for the several regions show very similar trends. The greatest change was in the New England area where the Bureau's retail price index moved from 92.1 in 1935 to 100 by July 1938, but even in this area price changes were very infrequent with only 3 changes recorded during the 5-year period.

CHART XXXIV
HOLLOW BUILDING TILE
WHOLESALE AND RETAIL PRICE INDEXES
JULY - SEPTEMBER 1939 = 100



UNITED STATES BUREAU OF LABOR STATISTICS

FLOOR TILE

Price Levels.

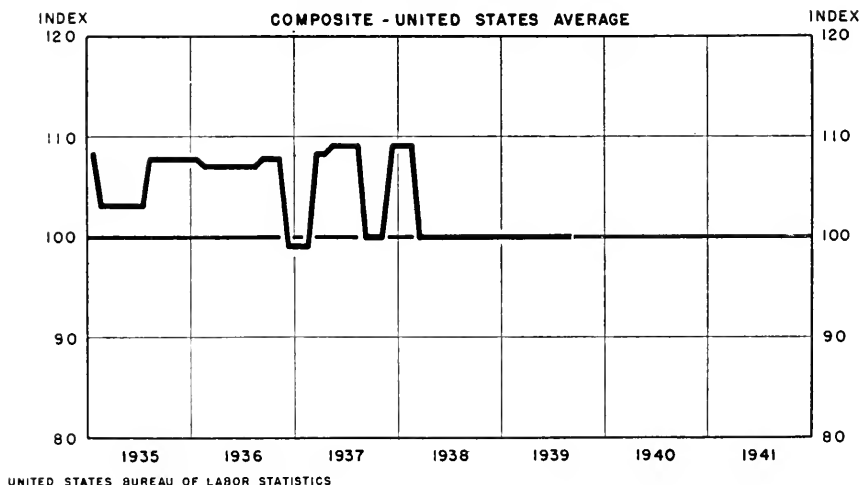
Only one level of prices of floor tile is available for study. Since these prices are on an f. o. b. plant plus freight basis, considerable variation occurs among the different regions. The range of typical prices and average typical prices by regions are as follows:

Region	Typical prices	
	Range	Average
I. New England.....	\$0.2283 to \$0.2335.....	\$0.2315
II. Middle Atlantic.....	\$0.2160 to \$0.2242.....	.2211
III. East North Central.....	\$0.2230 to \$0.2306.....	.2277
IV. West North Central.....	\$0.2309 to \$0.2510.....	.2433
V. South Atlantic.....	\$0.2242 to \$0.2505.....	.2321
VI. East South Central.....	\$0.2274 to \$0.2426.....	.2370
VII. West South Central.....	\$0.2443 to \$0.2621.....	.2531
VIII. Rocky Mountain.....	\$0.2636 to \$0.3162.....	.2824
IX. Pacific.....	\$0.2560 to \$0.2884.....	.2765
United States.....	.....	.2457

Price Trends. (See chart XXXV and table 258.)

Floor tile prices have fluctuated more than those of the structural clay products dealt with above. In January 1935, the index, based on July-September 1939=100, was 108.3. In February 1935, the price dropped about 5 percent but regained most of the drop in August of that year. It then remained almost unchanged until December 1936, when it dropped 8 percent. In March 1937 it rose to its former level and in May it again advanced slightly, but in September the trend was reversed and prices fell to the base level. In December the index again rose, canceling its September decline, but in March 1938 it dropped once more to the base period level, where it remained for the balance of the period.

CHART XXXV
FLOOR TILE
WHOLESALE PRICE INDEXES
JULY - SEPTEMBER 1939 = 100



This trend was followed in all regions except the Pacific coast, where the 1935 price was below the base level instead of above it. The index remained below 100 until March 1937, when the base period level was reached. No further changes occurred between March 1937 and September 1939.

SEWER PIPE

*Price Levels.*¹

The retail price of 6-inch vitrified sewer pipe in September 1939 ranged from \$0.1500 per foot near a center of production in the West North Central area to about \$0.3500 in some of the Rocky Mountain area cities. Geographical variations of prices seem to reflect chiefly the distance of the market from the centers of production. The range

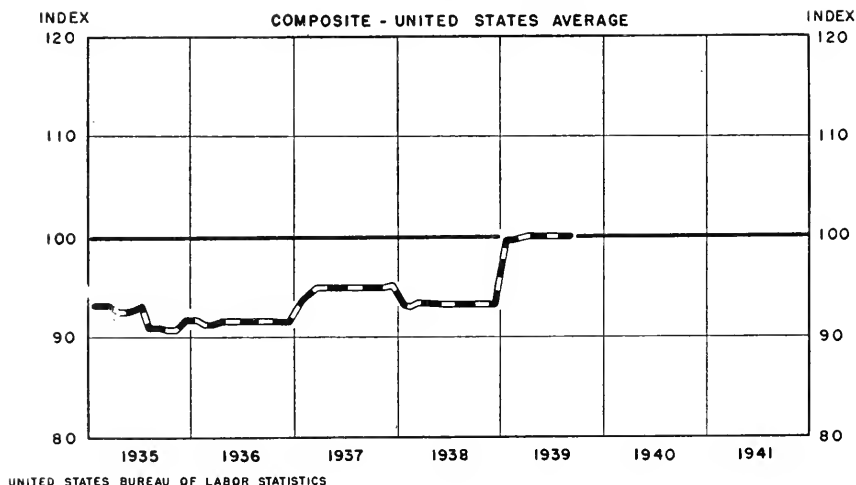
¹ The wholesale price data for sewer pipe were fragmentary and, therefore, have not been included in this study.

of retail prices and average typical prices by regions, as of September 1939, were as follows:

Region	Typical retail price	
	Range	Average
I. New England.....	\$0.1800 to \$0.2300.....	\$0.2100
II. Middle Atlantic.....	\$0.1925 to \$0.2300.....	.2092
III. East North Central.....	\$0.1800 to \$0.2000.....	.1872
IV. West North Central.....	\$0.1500 to \$0.2610.....	.2050
V. South Atlantic.....	\$0.1900 to \$0.3000.....	.2206
VI. East South Central.....	\$0.2100 to \$0.2300.....	.2131
VII. West South Central.....	\$0.2100 to \$0.2400.....	.2260
VIII. Rocky Mountain.....	\$0.2500 to \$0.3500.....	.2969
IX. Pacific.....	\$0.2340 to \$0.2625.....	.2530
United States.....	\$0.1500 to \$0.3500.....	.2286

CHART XXXVI

SEWER PIPE RETAIL PRICE INDEXES JULY - SEPTEMBER 1939 = 100



Price Trends. (See chart XXXVI and table 259.)

Like most of the structural clay products, sewer pipe prices show little or no fluctuation. The low point at retail was reached at the end of 1935 (90.7) and the high from April through September 1939. General commodity market trends are reflected to a limited extent in sewer pipe prices; thus there was an upswing of 4 percent from December 1936 to March 1937 and a drop early in 1938. However, prices rose again in January 1939 (7 percent) and reached the base period level in April after two additional minor changes.

Regional prices show trends similar to the national average in producing areas such as the East North Central and West North Central regions, while in areas not producing sewer pipe, prices are more stable.

TABLE 237.—*Common brick*
COMPOSITE UNITED STATES AVERAGE
[Retail price indexes—July–September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	96.1	September.....	97.1	March.....	99.1
February.....	96.1	October.....	97.1	April.....	99.1
March.....	96.1	November.....	97.1	May.....	98.9
April.....	96.2	December.....	97.1	June.....	98.9
May.....	96.2			July.....	99.8
June.....	96.2	1937		August.....	99.7
July.....	96.2	January.....	98.1	September.....	99.8
August.....	96.1	February.....	98.1	October.....	99.9
September.....	95.9	March.....	98.2	November.....	99.9
October.....	95.9	April.....	98.0	December.....	99.9
November.....	95.9	May.....	98.2		
December.....	96.2	June.....	98.2	1939	
1936		July.....	98.5	January.....	99.9
January.....	95.9	August.....	98.5	February.....	99.9
February.....	96.6	September.....	98.5	March.....	101.4
March.....	96.6	October.....	98.5	April.....	101.6
April.....	96.6	November.....	98.4	May.....	101.6
May.....	97.2	December.....	98.5	June.....	100.0
June.....	97.1	1938		July.....	100.2
July.....	97.1	January.....	98.7	August.....	100.2
August.....	97.1	February.....	98.7	September.....	99.9

Specification: Brick, common, building; per M.

Retail: Producer or dealer to contractor, delivered to job site, city.

TABLE 238.—*Common brick*
REGION I. NEW ENGLAND
[Retail price index—July–September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	90.9	September.....	91.5	March.....	100.0
February.....	90.9	October.....	91.5	April.....	100.0
March.....	90.9	November.....	91.5	May.....	100.0
April.....	90.9	December.....	91.5	June.....	100.0
May.....	90.9			July.....	100.0
June.....	90.9	1937		August.....	100.0
July.....	90.9	January.....	98.9	September.....	100.0
August.....	90.9	February.....	98.9	October.....	100.0
September.....	90.9	March.....	98.9	November.....	100.0
October.....	90.9	April.....	98.9	December.....	100.0
November.....	90.9	May.....	98.9		
December.....	90.9	June.....	98.9	1939	
1936		July.....	98.9	January.....	100.0
January.....	91.5	August.....	98.9	February.....	100.0
February.....	91.5	September.....	98.9	March.....	100.0
March.....	91.5	October.....	98.9	April.....	100.0
April.....	91.5	November.....	98.9	May.....	100.0
May.....	91.5	December.....	98.9	June.....	100.0
June.....	91.5	1938		July.....	100.0
July.....	91.5	January.....	99.4	August.....	100.0
August.....	91.5	February.....	100.0	September.....	100.0

Specification: Brick, common, building; per M.

Retail: Producer or dealer to contractor, delivered to job site, city.

TABLE 239.—*Common brick*

REGION II. MIDDLE ATLANTIC

[Retail price index—July–September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	100.0	September.....	100.0	March.....	100.0
February.....	100.0	October.....	100.0	April.....	100.0
March.....	100.0	November.....	100.0	May.....	100.0
April.....	100.0	December.....	100.0	June.....	100.0
May.....	100.0			July.....	100.0
June.....	100.0	1937		August.....	100.0
July.....	100.0	January.....	100.0	September.....	100.0
August.....	100.0	February.....	100.0	October.....	100.0
September.....	100.0	March.....	100.0	November.....	100.0
October.....	100.0	April.....	100.0	December.....	100.0
November.....	100.0	May.....	100.0		
December.....	100.0	June.....	100.0	1939	
		July.....	100.0	January.....	100.0
1936		August.....	100.0	February.....	100.0
January.....	100.0	September.....	100.0	March.....	103.4
February.....	100.0	October.....	100.0	April.....	103.4
March.....	100.0	November.....	100.0	May.....	103.4
April.....	100.0	December.....	100.0	June.....	100.0
May.....	100.0			July.....	100.0
June.....	100.0	1938		August.....	100.0
July.....	100.0	January.....	100.0	September.....	100.0
August.....	100.0	February.....	100.0		

Specification: Brick, common, building; per M.

Retail: Producer or dealer to contractor, delivered to job site, city.

TABLE 240.—*Common brick*

REGION III. EAST NORTH CENTRAL

[Retail price index—July–September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	81.9	September.....	88.4	March.....	100.2
February.....	81.9	October.....	88.4	April.....	100.2
March.....	81.9	November.....	88.4	May.....	100.2
April.....	81.9	December.....	88.4	June.....	100.2
May.....	81.9			July.....	100.2
June.....	81.9	1937		August.....	99.8
July.....	81.9	January.....	93.9	September.....	99.8
August.....	81.9	February.....	93.9	October.....	99.8
September.....	80.1	March.....	93.9	November.....	99.8
October.....	80.1	April.....	98.0	December.....	99.8
November.....	80.1	May.....	98.3		
December.....	80.1	June.....	98.3	1939	
		July.....	99.9	January.....	99.8
1936		August.....	100.2	February.....	99.8
January.....	80.1	September.....	100.2	March.....	99.8
February.....	84.8	October.....	100.2	April.....	100.0
March.....	84.8	November.....	100.2	May.....	100.0
April.....	84.8	December.....	100.2	June.....	100.0
May.....	88.4			July.....	100.0
June.....	88.4	1938		August.....	100.0
July.....	88.4	January.....	100.2	September.....	100.0
August.....	88.4	February.....	100.2		

Specification: Brick, common, building; per M.

Retail: Producer or dealer to contractor, delivered to job site, city.

TABLE 241.—*Common brick*

REGION IV. WEST NORTH CENTRAL

[Retail price index—July-September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	105.4	September.....	103.4	March.....	100.2
February.....	105.4	October.....	103.4	April.....	100.2
March.....	105.4	November.....	103.4	May.....	99.1
April.....	105.4	December.....	103.4	June.....	99.1
May.....	105.4			July.....	99.1
June.....	105.4	1937		August.....	99.1
July.....	105.4	January.....	103.4	September.....	99.1
August.....	103.3	February.....	103.4	October.....	99.1
September.....	103.3	March.....	105.3	November.....	99.1
October.....	103.3	April.....	104.5	December.....	99.1
November.....	103.3	May.....	104.5		
December.....	103.3	June.....	104.5	1939	
		July.....	104.5	January.....	99.1
1936		August.....	103.5	February.....	99.1
January.....	103.4	September.....	102.4	March.....	100.2
February.....	103.4	October.....	102.4	April.....	100.2
March.....	103.4	November.....	102.4	May.....	100.2
April.....	103.4	December.....	102.4	June.....	100.2
May.....	103.4			July.....	100.2
June.....	103.4	1938		August.....	100.2
July.....	103.4	January.....	102.4	September.....	99.6
August.....	103.4	February.....	101.3		

Specification: Brick, common, building; per M.

Retail: Producer or dealer to contractor, delivered to job site, city.

TABLE 242.—*Common brick*

REGION V. SOUTH ATLANTIC

[Retail price index—July-September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	98.1	September.....	99.4	March.....	101.5
February.....	98.1	October.....	99.4	April.....	101.5
March.....	98.1	November.....	99.4	May.....	99.6
April.....	98.9	December.....	99.4	June.....	99.6
May.....	98.9			July.....	99.6
June.....	98.9	1937		August.....	100.2
July.....	99.0	January.....	99.7	September.....	100.2
August.....	99.0	February.....	99.7	October.....	100.2
September.....	99.0	March.....	100.2	November.....	100.2
October.....	99.0	April.....	100.2	December.....	100.2
November.....	99.0	May.....	102.0		
December.....	99.0	June.....	102.0	1939	
1936		July.....	102.0	January.....	101.2
January.....	99.4	August.....	102.0	February.....	101.2
February.....	99.4	September.....	102.0	March.....	101.2
March.....	99.4	October.....	102.0	April.....	101.2
April.....	99.4	November.....	102.0	May.....	101.2
May.....	99.4	December.....	102.0	June.....	101.2
June.....	99.4			July.....	101.2
July.....	99.4	1938		August.....	101.2
August.....	99.4	January.....	102.0	September.....	99.7
		February.....	102.0		

Specification: Brick, common, building; per M.

Retail: Producer or dealer to contractor, delivered to job site, city.

TABLE 243.—*Common brick*

REGION VI. EAST SOUTH CENTRAL

[Retail price index—July–September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	103.2	September.....	103.2	March.....	101.7
February.....	103.2	October.....	103.2	April.....	101.7
March.....	103.2	November.....	103.2	May.....	101.7
April.....	103.2	December.....	103.2	June.....	101.7
May.....	103.2			July.....	100.0
June.....	103.2	1937		August.....	100.0
July.....	103.2	January.....	103.2	September.....	100.0
August.....	103.2	February.....	103.2	October.....	100.0
September.....	103.2	March.....	103.2	November.....	100.0
October.....	103.2	April.....	103.2	December.....	100.0
November.....	103.2	May.....	103.2		
December.....	103.2	June.....	103.2	1939	
		July.....	103.2	January.....	100.0
1936		August.....	103.2	February.....	100.0
January.....	103.2	September.....	103.2	March.....	100.0
February.....	103.2	October.....	103.2	April.....	100.0
March.....	103.2	November.....	103.2	May.....	100.0
April.....	103.2	December.....	103.2	June.....	100.0
May.....	103.2			July.....	100.0
June.....	103.2	1938		August.....	100.0
July.....	103.2	January.....	101.7	September.....	100.0
August.....	103.2	February.....	101.7		

Specification: Brick, common, building; per M.

Retail: Producer or dealer to contractor, delivered to job site, city.

TABLE 244.—*Common brick*

REGION VII. WEST SOUTH CENTRAL

[Retail price index—July–September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	95.7	September.....	95.7	March.....	95.7
February.....	95.7	October.....	95.7	April.....	95.7
March.....	95.7	November.....	95.7	May.....	95.7
April.....	95.7	December.....	95.7	June.....	95.7
May.....	95.7			July.....	100.0
June.....	95.7	1937		August.....	100.0
July.....	95.7	January.....	95.7	September.....	100.0
August.....	95.7	February.....	95.7	October.....	100.0
September.....	95.7	March.....	95.7	November.....	100.0
October.....	95.7	April.....	82.8	December.....	100.0
November.....	95.7	May.....	82.8		
December.....	95.7	June.....	82.8	1939	
1936		July.....	82.8	January.....	100.0
January.....	95.7	August.....	82.8	February.....	100.0
February.....	95.7	September.....	82.8	March.....	100.0
March.....	95.7	October.....	82.8	April.....	100.0
April.....	95.7	November.....	82.8	May.....	100.0
May.....	95.7	December.....	82.8	June.....	100.0
June.....	95.7			July.....	100.0
July.....	95.7	1938		August.....	100.0
August.....	95.7	January.....	87.1	September.....	100.0
		February.....	87.1		

Specification: Brick, common, building; per M.

Retail: Producer or dealer to contractor, delivered to job site, city.

TABLE 245.—*Common brick*
REGION VIII. ROCKY MOUNTAIN

[Retail price index—July–September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January	97.4	September	95.6	March	94.9
February	97.4	October	95.6	April	94.9
March	97.4	November	95.6	May	94.9
April	97.4	December	95.6	June	94.9
May	97.4			July	94.9
June	97.4	1937		August	94.9
July	97.4	January	95.6	September	94.6
August	97.4	February	95.6	October	96.8
September	97.4	March	95.0	November	96.8
October	97.4	April	93.9	December	96.8
November	97.4	May	93.9		
December	97.4	June	93.6	1939	
		July	93.0	January	96.8
1936		August	93.9	February	96.8
January	97.4	September	93.9	March	96.8
February	97.4	October	93.9	April	100.2
March	97.4	November	92.6	May	100.2
April	97.4	December	94.9	June	100.2
May	97.4			July	100.2
June	95.6	1938		August	100.2
July	95.6	January	94.9	September	99.6
August	95.6	February	94.9		

Specification: Brick, common, building, per M.

Retail: Producer or dealer to contractor, delivered to job site, city.

TABLE 246.—*Common brick*

REGION IX. PACIFIC

[Retail price index—July–September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January	93.8	September	93.8	March	93.8
February	93.8	October	93.8	April	93.8
March	93.8	November	93.8	May	93.8
April	93.8	December	93.8	June	93.8
May	93.8			July	100.0
June	93.8	1937		August	100.0
July	93.8	January	93.8	September	100.0
August	93.8	February	93.8	October	100.0
September	93.8	March	93.8	November	100.0
October	93.8	April	93.8	December	100.0
November	93.8	May	93.8		
December	93.8	June	93.8	1939	
		July	93.8	January	100.0
1936		August	93.8	February	100.0
January	93.8	September	93.8	March	100.0
February	93.8	October	93.8	April	100.0
March	93.8	November	93.8	May	100.0
April	93.8	December	93.8	June	100.0
May	93.8			July	100.0
June	93.8	1938		August	100.0
July	93.8	January	93.8	September	100.0
August	93.8	February	93.8		

Specification: Brick, common, building; per M.

Retail: Producer or dealer to contractor, delivered to job site, city.

TABLE 247.—*Face brick*

COMPOSITE UNITED STATES AVERAGE

[Retail price indexes—July–September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	94.8	September.....	96.0	March.....	99.5
February.....	94.8	October.....	96.0	April.....	99.5
March.....	94.8	November.....	96.0	May.....	99.5
April.....	94.8	December.....	96.1	June.....	99.5
May.....	94.8			July.....	99.3
June.....	94.8	1937		August.....	100.4
July.....	95.1	January.....	96.0	September.....	100.4
August.....	94.9	February.....	96.0	October.....	100.0
September.....	94.9	March.....	96.0	November.....	100.0
October.....	94.9	April.....	97.8	December.....	100.0
November.....	94.9	May.....	97.9		
December.....	94.9	June.....	97.9	1939	
		July.....	97.9	January.....	100.0
1936		August.....	97.9	February.....	100.0
January.....	95.7	September.....	97.9	March.....	100.0
February.....	96.0	October.....	99.3	April.....	100.2
March.....	96.0	November.....	99.3	May.....	100.2
April.....	96.0	December.....	99.5	June.....	100.2
May.....	96.0			July.....	100.2
June.....	96.0	1938		August.....	100.0
July.....	96.0	January.....	99.3	September.....	100.0
August.....	96.0	February.....	99.3		

Specification: Brick, face, standard colonial red, smooth; per M.

Retail: Producer or dealer to contractor, delivered to job site, city.

TABLE 248.—*Face brick*

REGION I. NEW ENGLAND

[Retail price indexes—July–September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	96.1	September.....	95.9	March.....	100.0
February.....	96.1	October.....	95.9	April.....	100.0
March.....	96.1	November.....	95.9	May.....	100.0
April.....	96.1	December.....	95.9	June.....	100.0
May.....	96.1			July.....	100.0
June.....	96.1	1937		August.....	100.0
July.....	95.9	January.....	99.6	September.....	100.0
August.....	95.9	February.....	99.6	October.....	100.0
September.....	95.9	March.....	99.6	November.....	100.0
October.....	95.9	April.....	99.6	December.....	100.0
November.....	95.9	May.....	99.6		
December.....	95.9	June.....	99.6	1939	
		July.....	99.6	January.....	100.0
1936		August.....	99.6	February.....	100.0
January.....	95.9	September.....	99.6	March.....	100.0
February.....	95.9	October.....	99.6	April.....	100.0
March.....	95.9	November.....	99.6	May.....	100.0
April.....	95.9	December.....	99.6	June.....	100.0
May.....	95.9			July.....	100.0
June.....	95.9	1938		August.....	100.0
July.....	95.9	January.....	99.6	September.....	100.0
August.....	95.9	February.....	100.0		

Specification: Brick, face, standard colonial red, smooth; per M.

Retail: Producer or dealer to contractor, delivered to job site, city.

TABLE 249.—*Face brick.*

REGION II. MIDDLE ATLANTIC

[Retail Price Indexes—July–September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	95.8	September.....	95.8	March.....	100.0
February.....	95.8	October.....	95.8	April.....	100.0
March.....	95.8	November.....	95.8	May.....	100.0
April.....	95.8	December.....	95.8	June.....	100.0
May.....	95.8	1937		July.....	100.0
June.....	95.8	January.....	95.8	August.....	100.0
July.....	95.8	February.....	95.8	September.....	100.0
August.....	95.8	March.....	95.8	October.....	100.0
September.....	95.8	April.....	100.0	November.....	100.0
October.....	95.8	May.....	100.0	December.....	100.0
November.....	95.8	June.....	100.0	1939	
December.....	95.8	July.....	100.0	January.....	100.0
1936		August.....	100.0	February.....	100.0
January.....	95.8	September.....	100.0	March.....	100.0
February.....	95.8	October.....	100.0	April.....	100.0
March.....	95.8	November.....	100.0	May.....	100.0
April.....	95.8	December.....	100.0	June.....	100.0
May.....	95.8	1938		July.....	100.0
June.....	95.8	January.....	100.0	August.....	100.0
July.....	95.8	February.....	100.0	September.....	100.0
August.....	95.8				

Specification: Brick, face, standard colonial red, smooth; per M.

Retail: Producer or dealer to contractor, delivered to job site, city.

TABLE 250.—*Face brick*

REGION III. EAST NORTH CENTRAL

[Retail price indexes—July–September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	87.4	September.....	95.2	March.....	96.2
February.....	87.4	October.....	95.2	April.....	96.2
March.....	87.4	November.....	95.2	May.....	96.2
April.....	87.4	December.....	95.2	June.....	96.2
May.....	87.4	1937		July.....	96.2
June.....	87.4	January.....	95.2	August.....	103.6
July.....	87.4	February.....	95.2	September.....	103.6
August.....	87.4	March.....	95.2	October.....	101.0
September.....	87.4	April.....	95.2	November.....	101.0
October.....	87.4	May.....	96.2	December.....	101.0
November.....	87.4	June.....	96.2	1939	
December.....	87.4	July.....	96.2	January.....	101.0
1936		August.....	96.2	February.....	101.0
January.....	92.7	September.....	96.2	March.....	101.0
February.....	95.2	October.....	96.2	April.....	101.5
March.....	95.2	November.....	96.2	May.....	101.5
April.....	95.2	December.....	96.2	June.....	101.5
May.....	95.2	1938		July.....	101.5
June.....	95.2	January.....	96.2	August.....	100.0
July.....	95.2	February.....	96.2	September.....	100.0
August.....	95.2				

Specification: Brick, face, standard colonial red, smooth; per M.

Retail: Producer or dealer to contractor, delivered to job site, city.

TABLE 251.—*Face brick*

REGION IV. WEST NORTH CENTRAL

[Retail price indexes—July–September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January	104.0	September	104.0	March	101.0
February	104.0	October	104.0	April	101.0
March	104.0	November	104.0	May	101.0
April	104.0	December	104.0	June	101.0
May	104.0			July	99.9
June	104.0	1937		August	99.9
July	104.0	January	104.0	September	99.9
August	104.0	February	104.0	October	99.9
September	104.0	March	104.0	November	99.9
October	104.0	April	100.9	December	99.9
November	104.0	May	100.9		
December	104.0	June	100.9	1939	
1936		July	100.9	January	99.8
January	104.0	August	100.9	February	99.8
February	104.0	September	100.9	March	99.8
March	104.0	October	100.9	April	99.8
April	104.0	November	100.9	May	99.8
May	104.0	December	100.9	June	99.8
June	104.0			July	99.8
July	104.0	1938		August	99.8
August	101.0	January	101.0	September	100.3
		February	101.0		

Specification: Brick, face, standard colonial red, smooth; per M.

Retail: Producer or dealer to contractor, delivered to job site, city.

TABLE 252.—*Face brick*

REGION V. SOUTH ATLANTIC

[Retail price indexes—July–September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January	99.0	September	101.5	March	100.0
February	99.0	October	101.5	April	100.0
March	99.0	November	101.5	May	100.0
April	99.0	December	101.5	June	100.0
May	99.0			July	100.0
June	99.0	1937		August	100.0
July	101.5	January	99.9	September	100.0
August	101.5	February	99.9	October	100.0
September	101.5	March	99.9	November	100.0
October	101.5	April	99.9	December	100.0
November	101.5	May	99.9		
December	101.5	June	99.9	1939	
1936		July	99.9	January	100.0
January	101.5	August	99.9	February	100.0
February	101.5	September	99.9	March	100.0
March	101.5	October	99.9	April	100.0
April	101.5	November	99.9	May	100.0
May	101.5	December	99.9	June	100.0
June	101.5			July	100.0
July	101.5	1938		August	100.0
August	101.5	January	98.9	September	100.0
		February	98.9		

Specification: Brick, face, standard colonial red, smooth; per M.

Retail: Producer or dealer to contractor, delivered to job site, city.

TABLE 253.—*Face brick*

REGION VI. EAST SOUTH CENTRAL

[Retail price indexes—July–September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	107.8	September.....	107.8	March.....	106.5
February.....	107.8	October.....	107.8	April.....	106.5
March.....	107.8	November.....	107.8	May.....	106.5
April.....	107.8	December.....	107.8	June.....	106.5
May.....	107.8	1937		July.....	100.0
June.....	107.8	January.....	107.8	August.....	100.0
July.....	107.8	February.....	107.8	September.....	100.0
August.....	107.8	March.....	107.8	October.....	100.0
September.....	107.8	April.....	107.8	November.....	100.0
October.....	107.8	May.....	107.8	December.....	100.0
November.....	107.8	June.....	107.8	1939	
December.....	107.8	July.....	107.8	January.....	100.0
1936		August.....	107.8	February.....	100.0
January.....	107.8	September.....	107.8	March.....	100.0
February.....	107.8	October.....	107.8	April.....	100.0
March.....	107.8	November.....	107.8	May.....	100.0
April.....	107.8	December.....	107.8	June.....	100.0
May.....	107.8	1938		July.....	100.0
June.....	107.8	January.....	106.5	August.....	100.0
July.....	107.8	February.....	106.5	September.....	100.0
August.....	107.8				

Specification: Brick, face, standard colonial red, smooth; per M.

Retail: Producer or dealer to contractor, delivered to job site, city.

TABLE 254.—*Face brick*

REGION VII. WEST SOUTH CENTRAL

[Retail price indexes—July–September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	101.2	September.....	101.2	March.....	101.2
February.....	101.2	October.....	101.2	April.....	101.2
March.....	101.2	November.....	101.2	May.....	101.2
April.....	101.2	December.....	101.2	June.....	101.2
May.....	101.2	1937		July.....	100.0
June.....	101.2	January.....	101.2	August.....	100.0
July.....	101.2	February.....	101.2	September.....	100.0
August.....	101.2	March.....	101.2	October.....	100.0
September.....	101.2	April.....	101.2	November.....	100.0
October.....	101.2	May.....	101.2	December.....	100.0
November.....	101.2	June.....	101.2	1939	
December.....	101.2	July.....	101.2	January.....	100.0
1936		August.....	101.2	February.....	100.0
January.....	101.2	September.....	101.2	March.....	100.0
February.....	101.2	October.....	101.2	April.....	100.0
March.....	101.2	November.....	101.2	May.....	100.0
April.....	101.2	December.....	101.2	June.....	100.0
May.....	101.2	1938		July.....	100.0
June.....	101.2	January.....	101.2	August.....	100.0
July.....	101.2	February.....	101.2	September.....	100.0
August.....	101.2				

Specification: Brick, face, standard colonial red, smooth; per M.

Retail: Producer or dealer to contractor, delivered to job site, city.

TABLE 255.—*Face brick*

[Retail price indexes—July–September 1939=100.0]

REGION VIII. ROCKY MOUNTAIN

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	93.1	October.....	84.2	March.....	92.0
February.....	93.1	November.....	84.2	April.....	94.2
March.....	93.1	December.....	86.4	May.....	94.2
April.....	93.1			June.....	94.2
May.....	93.1	1937		July.....	94.2
June.....	93.1	January.....	86.4	August.....	94.2
July.....	93.1	February.....	86.4	September.....	94.2
August.....	84.1	March.....	86.4	October.....	94.2
September.....	84.1	April.....	87.5	November.....	94.2
October.....	84.1	May.....	87.5	December.....	94.2
November.....	84.1	June.....	87.5		
December.....	84.1	July.....	87.5	1939	
		August.....	87.5	January.....	94.2
1936		September.....	87.5	February.....	94.2
January.....	84.1	October.....	87.5	March.....	94.2
February.....	84.1	November.....	87.5	April.....	100.0
March.....	84.2	December.....	92.0	May.....	100.0
April.....	84.2			June.....	100.0
May.....	84.2	1938		July.....	100.0
June.....	84.2	January.....	92.0	August.....	100.0
July.....	84.2	February.....	92.0	September.....	100.0
August.....	84.2				
September.....	84.2				

Specification: Brick, face, standard colonial red, smooth; per M.

Retail: Producer or dealer to contractor, delivered to job site, city.

TABLE 256.—*Face brick*

REGION IX. PACIFIC COAST

[Retail price indexes—July–September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	87.7	September.....	87.7	March.....	100.0
February.....	87.7	October.....	87.7	April.....	100.0
March.....	87.7	November.....	87.7	May.....	100.0
April.....	87.7	December.....	87.7	June.....	100.0
May.....	87.7			July.....	100.0
June.....	87.7	1937		August.....	100.0
July.....	87.7	January.....	87.7	September.....	100.0
August.....	87.7	February.....	87.7	October.....	100.0
September.....	87.7	March.....	87.7	November.....	100.0
October.....	87.7	April.....	87.7	December.....	100.0
November.....	87.7	May.....	87.7		
December.....	87.7	June.....	87.7	1939	
		July.....	87.7	January.....	100.0
1936		August.....	87.7	February.....	100.0
January.....	87.7	September.....	87.7	March.....	100.0
February.....	87.7	October.....	100.0	April.....	100.0
March.....	87.7	November.....	100.0	May.....	100.0
April.....	87.7	December.....	100.0	June.....	100.0
May.....	87.7			July.....	100.0
June.....	87.7	1938		August.....	100.0
July.....	87.7	January.....	100.0	September.....	100.0
August.....	87.7	February.....	100.0		

Specification: Brick, face, standard colonial red, smooth; per M.

Retail: Producer or dealer to contractor, delivered to job site, city.

TABLE 257.—*Hollow building tile*

COMPOSITE UNITED STATES AVERAGE

[Wholesale and retail price indexes—July–September 1939=100.0]

Year and month	Index		Year and month	Index	
	Whole-sale	Retail		Whole-sale	Retail
1935			1937—Continued		
January.....	99.0	99.5	June.....	99.6	99.7
February.....	99.0	99.5	July.....	99.6	99.7
March.....	99.0	99.5	August.....	99.6	99.7
April.....	99.0	99.5	September.....	99.6	100.0
May.....	99.0	99.5	October.....	99.8	100.0
June.....	99.0	99.5	November.....	99.8	100.0
July.....	99.0	99.5	December.....	99.8	100.0
August.....	99.0	99.5			
September.....	99.0	99.5	1938		
October.....	99.0	99.5	January.....	99.8	100.1
November.....	99.0	99.5	February.....	99.9	100.1
December.....	99.0	99.5	March.....	99.9	100.1
			April.....	99.9	100.1
1936			May.....	99.9	100.1
January.....	99.2	99.5	June.....	99.9	100.1
February.....	99.2	99.5	July.....	99.9	100.1
March.....	99.2	99.5	August.....	99.9	100.1
April.....	99.2	99.5	September.....	99.9	100.1
May.....	99.2	99.5	October.....	99.9	100.1
June.....	99.2	99.5	November.....	99.9	100.1
July.....	99.2	99.5	December.....	99.9	100.1
August.....	99.2	99.5			
September.....	99.2	99.5	1939		
October.....	99.2	99.5	January.....	99.9	99.8
November.....	99.2	99.5	February.....	99.9	99.8
December.....	99.2	99.5	March.....	99.9	99.8
			April.....	100.0	100.0
1937			May.....	100.0	100.0
January.....	99.2	99.5	June.....	100.0	100.0
February.....	99.2	99.5	July.....	100.0	100.0
March.....	99.2	99.6	August.....	100.0	100.0
April.....	99.6	99.7	September.....	100.0	100.0
May.....	99.6	99.7			

Specification: Tile, hollow building, partition, 4 by 12 by 12 inches, 3 cell, scored, 16 pounds weight; per M.

Wholesale: Producer to contractor, delivered to job.

Retail: Producer or dealer to contractor, delivered to job site, city.

TABLE 258.—*Floor tile*

COMPOSITE UNITED STATES AVERAGE

[Wholesale price indexes—July-September 1939=100.0]

Year and month	Whole-sale index	Year and month	Whole-sale index	Year and month	Whole-sale index
1935		1936—Con.		1938—Con.	
January.....	108.3	September.....	107.8	March.....	100.0
February.....	103.2	October.....	107.8	April.....	100.0
March.....	103.2	November.....	107.8	May.....	100.0
April.....	103.2	December.....	99.2	June.....	100.0
May.....	103.2	1937		July.....	100.0
June.....	103.2	January.....	99.2	August.....	100.0
July.....	103.2	February.....	99.2	September.....	100.0
August.....	107.8	March.....	108.3	October.....	100.0
September.....	107.8	April.....	108.3	November.....	100.0
October.....	107.8	May.....	109.1	December.....	100.0
November.....	107.8	June.....	109.1	1939	
December.....	107.8	July.....	109.1	January.....	100.0
1936		August.....	109.1	February.....	100.0
January.....	107.5	September.....	100.0	March.....	100.0
February.....	107.0	October.....	100.0	April.....	100.0
March.....	107.0	November.....	100.0	May.....	100.0
April.....	107.0	December.....	109.1	June.....	100.0
May.....	107.0	1938		July.....	100.0
June.....	107.0	January.....	109.1	August.....	100.0
July.....	107.0	February.....	109.1	September.....	100.0
August.....	107.0				

Specification: Tile, floor, 1-inch hexagon, standard grade, color group 1 (white, red, or gray); per square foot.

Wholesale: Producer to contractor, delivered to job.

TABLE 259.—*Sewer pipe*

COMPOSITE UNITED STATES AVERAGE

[Retail price indexes—July-September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Con.		1938—Con.	
January.....	93.2	September.....	91.6	March.....	93.4
February.....	93.2	October.....	91.6	April.....	93.4
March.....	93.2	November.....	91.5	May.....	93.4
April.....	92.6	December.....	91.5	June.....	93.3
May.....	92.6	1937		July.....	93.3
June.....	92.8	January.....	93.6	August.....	93.3
July.....	93.2	February.....	94.3	September.....	93.3
August.....	90.9	March.....	95.0	October.....	93.3
September.....	90.9	April.....	95.0	November.....	93.3
October.....	90.7	May.....	95.0	December.....	93.3
November.....	90.7	June.....	95.0	1939	
December.....	91.8	July.....	95.0	January.....	99.7
1936		August.....	95.0	February.....	99.7
January.....	91.8	September.....	95.0	March.....	99.9
February.....	91.3	October.....	95.0	April.....	100.0
March.....	91.3	November.....	95.0	May.....	100.0
April.....	91.6	December.....	95.2	June.....	100.0
May.....	91.6	1938		July.....	100.0
June.....	91.6	January.....	93.2	August.....	100.0
July.....	91.6	February.....	93.1	September.....	100.0
August.....	91.6				

Specification: Pipe, sewer, 6-inch vitrified; per foot.

Retail: Producer or dealer to contractor, delivered to job site, city.

CHAPTER XXIII

WINDOW GLASS

DESCRIPTION OF THE INDUSTRY

The production of window glass in the United States increased greatly in 1937 as compared with 1935. The value of product increased to \$31,000,000 from \$18,000,000 in these 2 years and the physical volume of production increased in about the same proportion. The following summary shows the volume and value of products, as published by the Census of Manufactures, "Glass," for the years indicated.

TABLE 260.—*Production of window glass*

Year	Production		
	Square feet	Value	Plant value (50 square feet) ¹
1925.....	567, 150, 590	\$37, 524, 728	\$3. 31
1927.....	481, 021, 350	26, 813, 507	2. 79
1929.....	402, 558, 961	25, 962, 167	3. 22
1931.....	266, 772, 159	10, 307, 396	1. 93
1933.....	249, 442, 799	10, 456, 883	2. 10
1935.....	428, 938, 357	18, 180, 053	2. 12
1937.....	616, 566, 127	31, 389, 468	2. 55

¹ Wholesale prices are quoted on boxes of 50 square feet.

The most important States in the production of window glass are Pennsylvania, Ohio, West Virginia, Indiana, Arkansas, Louisiana, and Oklahoma. Definite data on relative importance of the above States are not available. In 1935, 13 plants were active, located as follows: 5 in West Virginia, 3 in Pennsylvania, and 1 each in Louisiana, Oklahoma, Ohio, Arkansas, and Indiana. West Virginia and Pennsylvania together produced more than two-thirds of the total output, while the other States ranked in the order named.

The production of glass is concentrated in a few companies. The Department of Commerce reports that four companies produce 85 percent of the national output. In 1935 over 75 percent of the total was produced by three companies. Since 1935 some of the smaller companies have merged and at present this new company and the three companies previously mentioned constitute practically the entire window glass industry.

Three standard grades of window glass are manufactured—"AA," "A," and "B"—and each grade may be obtained in either single or double strength. The grade priced for this survey was window glass, single strength, B, 40-inch bracket, per 50 square feet, packaged, in

carlots. "Bracket" denotes the size of a sheet of glass in "united inches," that is, the sum of the length and width. For example, a sheet measuring 10 by 15 inches would be included under the 25-inch bracket, one measuring 20 by 30 inches in the 50-inch bracket, and one 20 by 20 inches in the 40-inch bracket. The glass is commonly packaged in lots of approximately 50 square feet per box.

PRICE STRUCTURE

Price Lists.

A standard basic price list for common window glass is used throughout the industry. Prices to the wholesale trade are quoted in terms of discounts from this list price, varying with size, quality, and thickness of glass.

Channels of Distribution.

Manufacturers' sales are usually made to distributors in carlot quantities (500 to 700 boxes). The distributor sells to the dealer in less-than-carlot quantities, and the dealer in turn to the building contractor. In a few large cities glass is installed in the sash at the job site.¹ Usually the distributor is the only one equipped for large-scale glazing. The retail dealer may do the glazing for residential construction. Much of the window glass is heavy, and the freight cost is an important element in the destination price.

Freight Equalization.

Manufacturer-to-distributor sales are made in carlots, freight usually equalized with nearest competitor (nearest to buyer, freight-wise). In other words, a customer buying glass from any producer pays the same freight charges he would have paid if he had purchased from the nearest plant. The rest of the freight charge is absorbed by the seller. In some sales, the manufacturer may absorb much of the freight cost. For example, if a buyer in Kansas City purchases from a producer in Clarksburg, W. Va., the freight rate is 70 cents per 100 pounds. However, since the nearest plant is at Henryetta, Okla., with a rate of 29 cents per 100 pounds to Kansas City, the difference of 41 cents per 100 pounds, or about 31 cents per box of glass, is absorbed by the seller. Of course, the producer may not make sales at points where freight absorption is prohibitive. The points of freight equalization in 1939 were Belle Vernon, Jeannette, and New Kensington, Pa.; Charleston and Clarksburg, W. Va.; Mount Vernon, Ohio; Vincennes, Ind.; Fort Smith, Ark.; Shreveport, La.; and Henryetta, Okla. Freight rates from two or more of these points to a specified destination may be the same, due to zone freight rates and other special rulings of the Interstate Commerce Commission. The usual carlot shipment is a minimum of 40,000 pounds, but the weight may range from 30,000 to 60,000 pounds. Table 261 shows the freight cost, to the purchaser, of a 75-pound box of glass (50 square feet), by cities, the percent of delivered price represented by freight, and the number of factory points to which the minimum rate is applicable.

¹ This is usually true only where the labor union organization is strong and can force the contractors to have the glazing done on the job as in Chicago, Ill., and Cleveland, Ohio.

TABLE 261.—*Transportation costs in the shipment of window glass to selected cities, September 1939*

Region and city	Factory points ¹	Freight cost per box	
		Amount	Percent of delivered price
Region I (New England):			
A. Portland, Maine.....	1-6-8	\$0.39	16
B. Manchester, N. H.....	1-6-7-8	.37	15
C. Burlington, Vt.....	7	.37	15
D. Boston, Mass.....	1-6-7-8	.37	15
E. Providence, R. I.....	1-6-7-8	.37	15
F. Hartford, Conn.....	1-6-8	.33	14
Region II (Middle Atlantic):			
A. New York, N. Y.....	1-6-8	.30	12
B. Trenton, N. J.....	1-6-8	.28	12
C. Philadelphia, Pa.....	1-6-8	.27	11
Region III (East North Central):			
A. Cleveland, Ohio.....	7	.18	8
B. Detroit, Mich.....	7	.20	9
C. Indianapolis, Ind.....	10	.18	8
D. Chicago, Ill.....	10	.23	10
E. Milwaukee, Wis.....	10	.26	11
Region IV (West North Central):			
A. Minneapolis, Minn.....	10	.45	18
B. Fargo, N. Dak.....	10	.59	23
C. Sioux Falls, S. Dak.....	4-5	.54	21
D. Des Moines, Iowa.....	4-5	.34	14
E. Omaha, Nebr.....	4-5	.40	16
F. Wichita, Kans.....	4-5	.25	11
G. St. Louis, Mo.....	10	.19	8
Region V (South Atlantic):			
A. Wilmington, Del.....	1-3-6-8	.27	11
B. Baltimore, Md.....	3	.24	10
C. Washington, D. C.....	3	.24	10
D. Charleston, W. Va.....		(²)	
E. Richmond, Va.....	2	.28	12
F. Charlotte, N. C.....	2	.36	15
G. Charleston, S. C.....	2	.46	18
H. Atlanta, Ga.....	10	.43	17
I. Miami, Fla.....	3-10	.73	26
Region VI (East South Central):			
A. Louisville, Ky.....	10	.18	8
B. Memphis, Tenn.....	4-9	.25	11
C. Birmingham, Ala.....	10	.40	16
D. Jackson, Miss.....	4-5-9	.27	11
Region VII (West South Central):			
A. Little Rock, Ark.....	4-9	.25	11
B. Oklahoma City, Okla.....	5	.19	8
C. Austin, Tex.....	9	.33	14
D. Houston, Tex.....	9	.26	11
E. New Orleans, La.....	9	.25	11
Region VIII (Rocky Mountain):			
A. Butte, Mont.....	4-5-9	.54	21
B. Boise, Idaho.....	4-5-9	.54	21
C. Cheyenne, Wyo.....	4-5-9	.54	21
D. Denver, Colo.....	4-5	.47	19
E. Salt Lake City, Utah.....	4-5-9	.54	21
F. Reno, Nev.....	4-5-9	.54	21
G. Phoenix, Ariz.....	4-5-9	.54	21
H. Albuquerque, N. Mex.....	4-5-9	.54	21
Region IX (Pacific):			
A. Seattle, Wash.....	4-5-9	.54	21
B. Portland, Oreg.....	4-5-9	.54	21
C. Los Angeles, Calif.....	4-5-9	.54	21

¹ Key to factory points: 1. Belle Vernon, Pa.; 2. Charleston, W. Va.; 3. Clarksburg, W. Va.; 4. Fort Smith, Ark.; 5. Henryetta, Okla.; 6. Jeannette, Pa.; 7. Mount Vernon, Ohio; 8. New Kensington, Pa.; 9. Shreveport, La.; 10. Vincennes, Ind.

² Shipping point.

³ Some of the shipments to Miami are by combination rail-water for which the cost per box of glass is 54.5 cents as compared to 73 cents by all rail.

Plants have been located, so far as supplies of raw materials and fuel permit, in various sections of the country primarily for the purpose of minimizing the freight charges.

PRICE LEVELS AND TRENDS

Geographical Variations.

Despite the varying freight costs to cities covered by this survey, the delivered prices were limited to a relatively small range. Freight costs varied from zero in Charleston, W. Va., a factory point, to 73 cents per box for Miami, Fla. These two cities also represented the extremes of delivered prices, \$2.10 and \$2.79, respectively, for a box of 50 square feet, 40-inch bracket glass. The following summary shows the distribution of cities according to delivered wholesale prices:

Range of typical prices	Number of cities	Range of typical prices	Number of cities
Less than \$2.25.....	1	\$2.50 to \$2.54.....	5
\$2.25 to \$2.29.....	7	\$2.55 to \$2.59.....	11
\$2.30 to \$2.34.....	8	\$2.60 to \$2.64.....	1
\$2.35 to \$2.39.....	5	\$2.65 and over.....	
\$2.40 to \$2.44.....	8		
\$2.45 to \$2.49.....	4	Total.....	50

The large number falling in the \$2.60 to \$2.64 range represents chiefly Rocky Mountain and Pacific cities with high freight costs.

Price Trends. (See chart XXXVII and table 262.)

The general trend of wholesale prices of window glass has been upward over the period covered by the survey. There was no great increase in price at any time, the sharpest advance of the period being 4 percent in May 1936. Other increases were 3 percent in January 1936 and less than 1 percent in January 1937 and January 1938. At no time during the period, January 1935 to September 1939, did prices decline. The Bureau's index of wholesale delivered prices of window glass for the United States, based on July to September 1939=100, was 92 through 1935. The index reached a level of 100 in January 1938, with no other changes through September 1939.

The indexes for the various regions followed the same pattern as the composite index, with only very slight variations, possibly due to changes in freight costs.

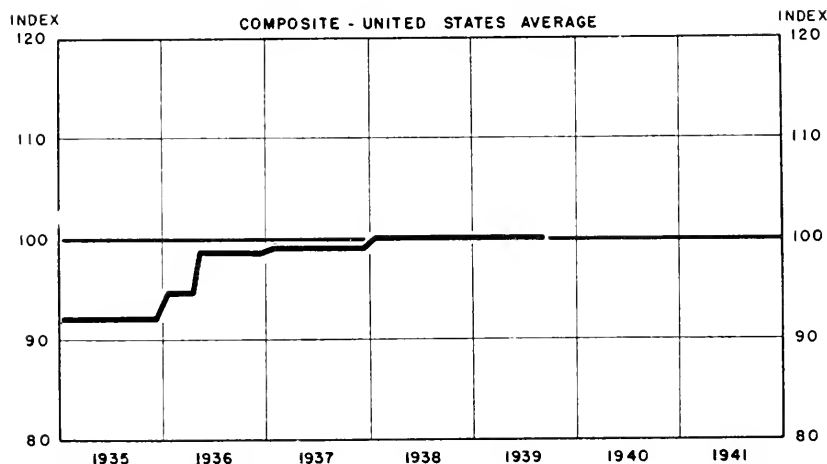
Many difficulties were encountered in obtaining comparable retail price data, and hence only fragmentary information is available. The trend data indicate, however, that consumers' prices of glass are held rigid over long periods.

CHART XXXVII

WINDOW GLASS

WHOLESALE PRICE INDEXES

JULY - SEPTEMBER 1939 = 100



UNITED STATES BUREAU OF LABOR STATISTICS

TABLE 262.—*Window glass*

COMPOSITE UNITED STATES AVERAGE

[Wholesale price indexes—July–September 1939=100.0]

Year and month	Wholesale index	Year and month	Wholesale index	Year and month	Wholesale index
1935		1936—Continued		1938—Continued	
January	92.1	September	98.7	March	100.0
February	92.1	October	98.7	April	100.0
March	92.1	November	98.7	May	100.0
April	92.1	December	98.7	June	100.0
May	92.1			July	100.0
June	92.1	1937		August	100.0
July	92.1	January	99.1	September	100.0
August	92.1	February	99.1	October	100.0
September	92.1	March	99.1	November	100.0
October	92.1	April	99.1	December	100.0
November	92.1	May	99.1		
December	92.1	June	99.1	1939	
1936		July	99.1	January	100.0
January	94.6	August	99.1	February	100.0
February	94.6	September	99.1	March	100.0
March	94.6	October	99.1	April	100.0
April	94.6	November	99.1	May	100.0
May	98.7	December	99.1	June	100.0
June	98.7			July	100.0
July	98.7	1938		August	100.0
August	98.7	January	100.0	September	100.0
		February	100.0		

Specification: Glass, window, single strength, B quality, 48-inch bracket.

Wholesale: Per 50 square feet, packaged, carlots.

CHAPTER XXIV

SAND, GRAVEL, AND CRUSHED STONE

DESCRIPTION OF THE INDUSTRY

Sand, gravel, and crushed stone are the principal aggregate materials used with cement to make concrete. It has been estimated that four-fifths of all sand and gravel produced commercially goes into some form of building or highway construction and about half is used with cement in concrete.¹

Approximately 18,500 men were employed producing sand and gravel in 1934 in an average work year of 168 days.² Forty-eight million tons of sand were sold by commercial producers in 1938, 23,000,000 tons of which were used in building. Fifty-seven million tons of gravel were sold by commercial producers in 1938, 29,000,000 tons of which were used in building. In 1938 commercial sand sold or used by producers was valued at \$32,000,000 at the pit, while gravel was valued at \$33,000,000. In addition, 89,000,000 tons of crushed stone classified as "concrete and road metal" were produced in 1938, valued at \$84,000,000. In 1929, the peak year in the sand and gravel industry, the value of 220,000,000 tons of all types of sand and gravel produced totaled about \$133,000,000.³

With materials abundant and transportation costs high, sand, gravel, and crushed stone are produced over a widely scattered area. In 1937 and 1938 production was reported in every State in the Union. In the latter year the largest producing State, New York, accounted for only 7 percent of the Nation's total. The small plant is the most typical unit in the sand and gravel industry. In 1938, 57 percent of all active plants produced less than 25,000 short tons and accounted for 10 percent of the total production, while 44 percent of the total product came from plants producing 100,000 tons or less.

PRICE STRUCTURE

Almost all sand, gravel, and crushed stone (85 percent of sand and gravel, 90 percent of crushed stone) produced is sold direct by the producer to the user, including contractors, governmental agencies, railroads, and ready-mixed concrete producers. Some sales are made through building material dealers, particularly in such areas as New York City, but in these instances the dealer may not actually handle the materials but acts merely as a salesman or commission agent.

PRICE LEVELS AND TRENDS

Price Levels.

Because of the wide variety in qualities of sand, gravel, and crushed stone deposits, specifications for pricing purposes are of

¹ U. S. Bureau of Mines, *Minerals Yearbook*, 1936, p. 846.

² *Ibid.*, p. 844.

³ U. S. Bureau of Mines, *Minerals Yearbook*, 1939, "Sand and gravel," pp. 1163, 1164.

necessity general. In many areas only the so-called "pit run" sand is sold because of relative nearness to consuming centers and prohibitory freight rates on other types. In other cities, different qualities of these materials are sold at varying prices. Geographical differentials, therefore, are differentials not only in price but in quality. Quality differentials were eliminated as much as possible in this survey by specifying ½-inch concrete sand, and 1½-inch gravel and stone.

Although regional differentials are attributable in part to differences in quality, they are primarily a reflection of a wide variety of local competitive and supply situations. The wide range of prices for these materials is shown in the following summary:

Range (price per ton) ¹	Number of cities			Range (price per ton) ¹	Number of cities		
	Sand	Gravel	Crushed stone		Sand	Gravel	Crushed stone
\$0.51 to \$0.75	2			\$2.01 to \$2.25	1	4	3
\$0.76 to \$1.00	12	6	2	\$2.26 to \$2.50	3	3	6
\$1.01 to \$1.25	17	8	1	\$2.51 and over	1	6	6
\$1.26 to \$1.50	3	7	3	Total	45	41	34
\$1.51 to \$1.75	3	6	8				
\$1.76 to \$2.00	3	1	5				

¹ Priced per ton or per yard in accordance with local custom but converted to per ton basis in all cases.

Sand prices varied from between 50 and 75 cents per ton to as high as \$3.25. Prices for gravel were as low as 76 cents and as high as \$3.74. The price range for crushed stone ran higher, from 76 cents to \$4.20 per ton. Marked regional differentials in levels are evident in the following compilation of averages:

Region	Average of typical prices			Region	Average of typical prices		
	Sand	Gravel	Crushed stone		Sand	Gravel	Crushed stone
	<i>Per ton</i> ¹	<i>Per ton</i> ¹	<i>Per ton</i> ¹		<i>Per ton</i> ¹	<i>Per ton</i> ¹	<i>Per ton</i> ¹
I. New England	\$0.88	\$1.18	\$1.75	VI. East South Central	\$1.55	\$2.32	\$3.00
II. Middle Atlantic	1.29	1.72	2.00	VII. West South Central	1.49	2.07	2.51
III. East North Central	1.23	1.33	2.08	VIII. Rocky Mountain	1.25	1.04	1.63
IV. West North Central .....	.92	2.01	1.93	IX. Pacific	1.39	1.23	1.55
V. South Atlantic	1.70	2.39	2.80				

¹ Priced per ton or per yard in accordance with local custom but converted to per ton basis in all cases.

In the case of all three materials, the highest regional average was approximately double the lowest. Highest prices were reported from the East South Central, West South Central, and South Atlantic areas; lowest prices in New England, West North Central, Rocky Mountain, and Pacific regions.

Price Trends.

Because of important geographical differentials in trends, the national composite of the aggregate material prices fails to represent the movements in any of the regions.

STONE

Except for an upward spurt late in 1935, which collapsed almost immediately, the national composite of crushed stone prices (see chart XXXVIII and tables 263 to 272) dropped by gradual stages in 1935 and 1936, falling 6 percent during these 2 years. In 1937 the index rose by a total of 15 percent, held fairly stable through 1938, dropped 10 percent early in 1939, and held at that level through September.

In New England only one major price change was reported, a 10 percent increase late in 1936. In the West North Central area, two price changes in 1936 resulted in a 10 percent rise. In the South Atlantic region the index fell from 100 to 91 in 1938 and recovered to 100 in 1939. In the West South Central States, a 10 percent price increase took place late in 1938. No changes were reported during the entire period in the East South Central or the Rocky Mountain regions.

Much greater flexibility in price was reported from the East North Central and Pacific areas. In the former, the index dropped from 110 in 1935 (based on the July to September 1939 average=100) to 103 in 1936 and then rose to 112 early in 1937, declining to 95 later in the year. Following a further drop to 91 in 1938, the index rose to 100 in 1939. In the Pacific area, the index started at 140 in 1935, dropped to 130, and rose to 162 later in that year. It then fell to 117 in 1936 and later in the same year to 113, then rising in successive jumps to 187 in 1937, and again falling slightly to 175 in 1938. In 1939, due to a "price war," the index fell over 40 percent in February to 102, later dropping still further to 99.

GRAVEL

The national composite index of gravel prices (see chart XXXIX and tables 273 to 282) reveals three major movements between 1935 and 1939. Based on the July to September 1939 average=100, the index rose from 94 to 101 late in 1937. In November 1938 it again advanced abruptly to 109 but lost this entire gain early in 1939. The regional averages, however, show conflicting patterns of behavior.

Prices remained virtually unchanged throughout the entire period in the South Atlantic and East South Central States. In New England three price changes in 1936 and 1937 brought the index down 11 percent from 112 to 100. In the West North Central area, two increases in 1935 and 1936 brought the index up 5 percent to 100, a level which remained unchanged for the 3 remaining years covered by the study. In the West South Central States gravel prices declined slightly every year, falling a total of 10 percent during the period. Price changes in the Rocky Mountain area were infrequent and narrow, the index rising once and falling three times for a net decrease of 6 percent. In the Middle Atlantic area the price rose twice in 1937 and 1938, making a total increase of 33 percent, the larger rise coming in 1938.

In the East North Central region prices dropped every year from 1935 through 1938, with a net decline of 16 percent. In the Pacific area the index declined from 146 to 136 and rose to 170 in 1935.

CHART XXXVIII

CRUSHED STONE
RETAIL PRICE INDEXES
JULY - SEPTEMBER 1939 = 100

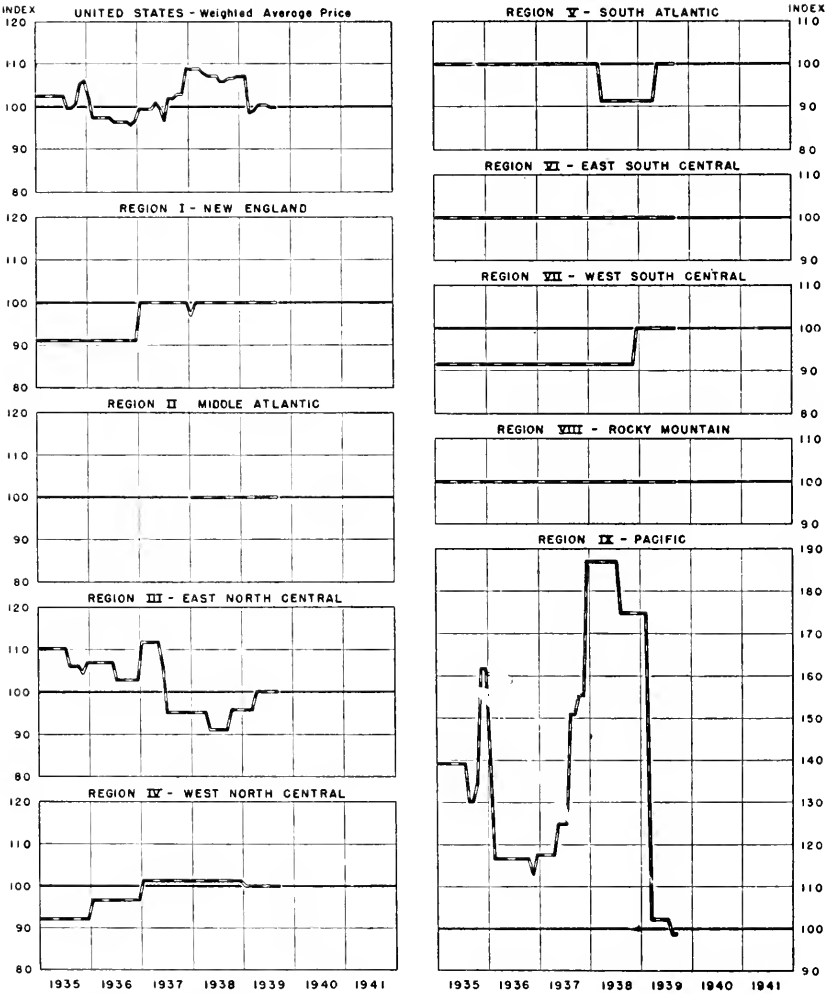
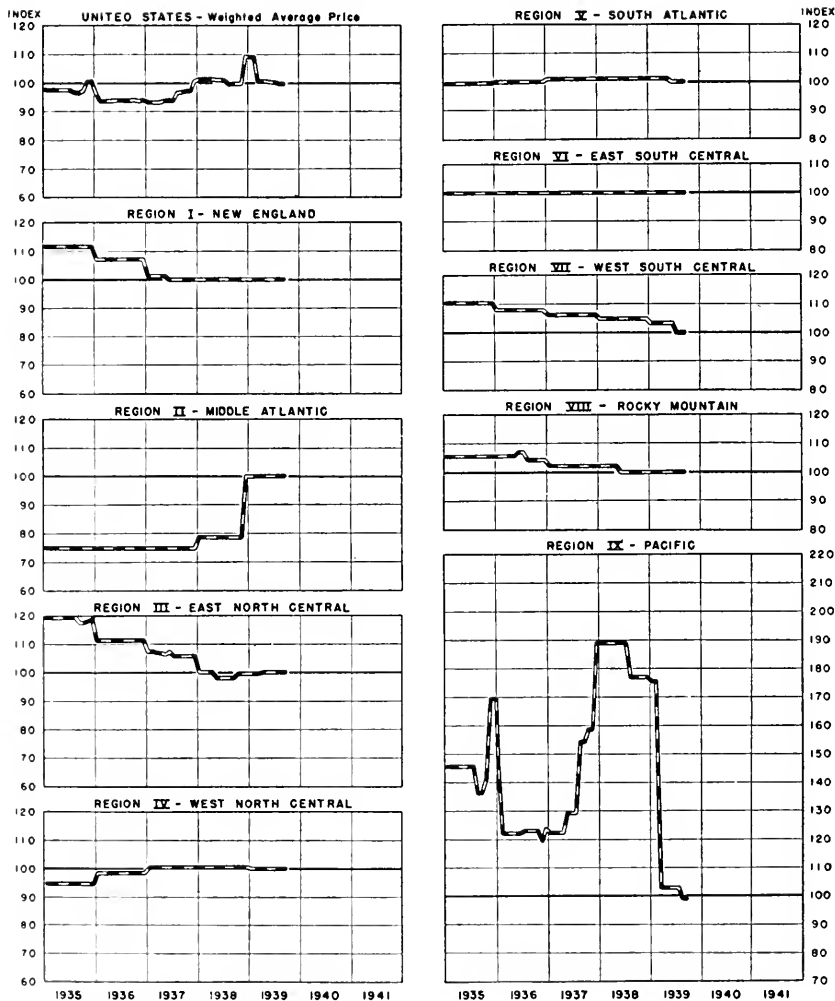


CHART XXXIX

GRAVEL

RETAIL PRICE INDEXES

JULY - SEPTEMBER 1939 = 100



but declined at first to 122 and then to 118 in 1936. Four increases in 1937 brought the index up to 189, but it dropped to 177 in 1938 and then broke sharply to 103 and later to 99 in 1939.

SAND

The national composite index of sand prices (see chart XL and tables 283 to 292) moved within a much narrower range, with widely divergent regional changes; it eased gradually from 98 in 1935 to 96 early in 1937, but rose abruptly later in the year to 101, falling back to 98 in 1938. In 1939 it first rose to 102 but then dropped slightly to 100.

Two changes in 1936 were the only ones reported from New England, the index falling in equal steps from 115 to 100. In the Middle Atlantic region the index rose slightly in 1937 from 79 to 81 and then advanced sharply 23 percent to 100 in 1939. In the West North Central States the index rose twice in 1936 but declined slightly in 1937 and 1938 for a net increase of 16 percent. In the South Atlantic States the index fluctuated between a high of 103 in 1935 and a low of 97 in 1938. In the East South Central States the index was unchanged during the entire period. In the West South Central region the index held steady until late in 1938 when it rose from 124 to 127, only to drop 21 percent in 1939. Four price declines in the Rocky Mountain area resulted in a gross decrease of 9 percent during the 5 years.

In the East North Central States the index fell steadily from 1935 to 1938, dropping from 122 to 98, and then recovered slightly to 100 in 1939. In the Pacific area the index dropped from 121 in 1935 to 108 in 1936, rose sharply to 158 in 1937, but fell even more sharply in 1938 and 1939 to the base period level of 100.

TABLE 263.—Crushed stone
COMPOSITE UNITED STATES AVERAGE
[Retail price indexes—July–September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	102.5	October.....	96.5	March.....	108.9
February.....	102.5	November.....	95.8	April.....	107.9
March.....	102.5	December.....	96.7	May.....	107.3
April.....	102.5			June.....	107.3
May.....	102.5	1937		July.....	107.3
June.....	102.5	January.....	99.5	August.....	105.9
July.....	102.5	February.....	99.5	September.....	105.9
August.....	99.7	March.....	99.5	October.....	106.6
September.....	99.7	April.....	99.5	November.....	106.6
October.....	100.6	May.....	100.9	December.....	107.1
November.....	105.4	June.....	99.5		
December.....	106.0	July.....	96.8	1939	
		August.....	101.9	January.....	107.1
1936		September.....	101.9	February.....	107.1
January.....	101.9	October.....	102.8	March.....	98.6
February.....	97.5	November.....	102.8	April.....	99.2
March.....	97.5	December.....	108.9	May.....	100.3
April.....	97.5			June.....	100.3
May.....	97.5	1938		July.....	100.3
June.....	97.5	January.....	108.8	August.....	99.9
July.....	96.5	February.....	108.9	September.....	99.9
August.....	96.5				
September.....	96.5				

Specification: Stone, crushed, coarse aggregate for concrete, 1½ inches maximum; per ton. (Priced per ton or per yard in accordance with local custom but converted to per ton basis in all cases.)

Retail: Producer to contractor, delivered to job site, city.

CHART XL

SAND

RETAIL PRICE INDEXES

JULY - SEPTEMBER 1939 = 100

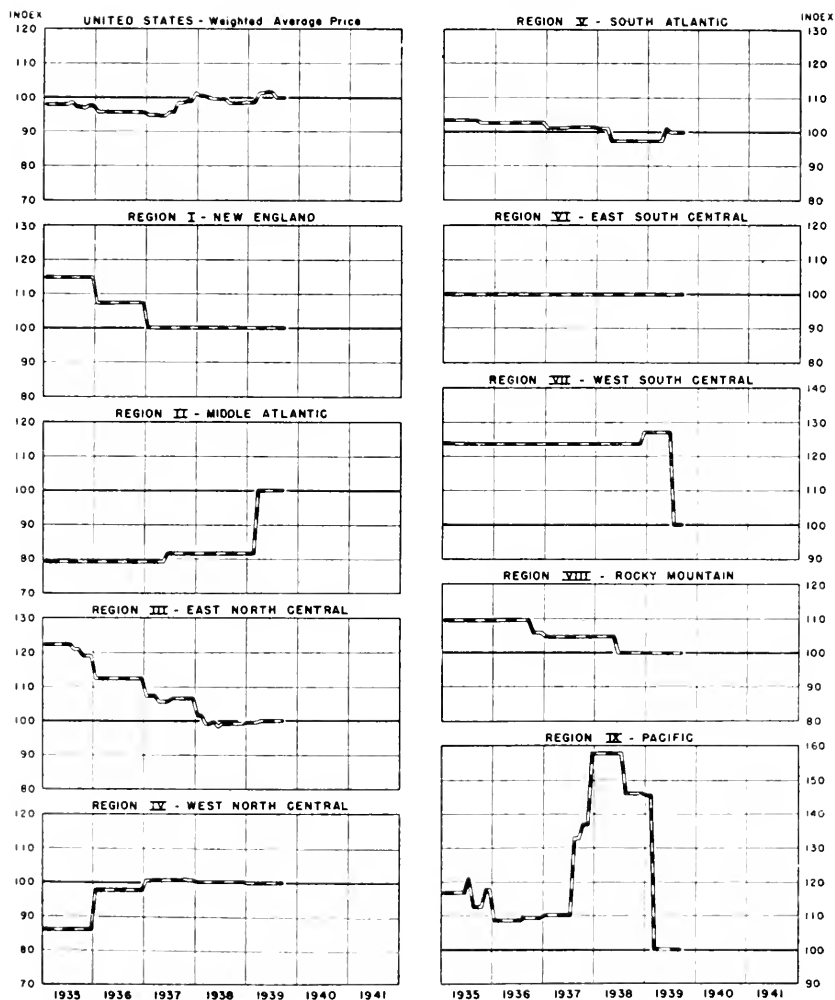


TABLE 264.—*Crushed stone*

REGION I. NEW ENGLAND

[Retail price indexes—July–September 1939 = 100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	91.1	September.....	91.1	March.....	100.0
February.....	91.1	October.....	91.1	April.....	100.0
March.....	91.1	November.....	91.1	May.....	100.0
April.....	91.1	December.....	91.1	June.....	100.0
May.....	91.1			July.....	100.0
June.....	91.1	1937		August.....	100.0
July.....	91.1	January.....	100.0	September.....	100.0
August.....	91.1	February.....	100.0	October.....	100.0
September.....	91.1	March.....	100.0	November.....	100.0
October.....	91.1	April.....	100.0	December.....	100.0
November.....	91.1	May.....	100.0		
December.....	91.1	June.....	100.0	1939	
		July.....	100.0	January.....	100.0
1936		August.....	100.0	February.....	100.0
January.....	91.1	September.....	100.0	March.....	100.0
February.....	91.1	October.....	100.0	April.....	100.0
March.....	91.1	November.....	100.0	May.....	100.0
April.....	91.1	December.....	100.0	June.....	100.0
May.....	91.1			July.....	100.0
June.....	91.1	1938		August.....	100.0
July.....	91.1	January.....	97.0	September.....	100.0
August.....	91.1	February.....	100.0		

Specification: Stone, crushed, coarse aggregate for concrete, 1½ inches maximum; per ton. (Priced per ton or per yard in accordance with local custom but converted to per ton basis in all cases.)

Retail: Producer to contractor, delivered to job site, city.

TABLE 265.—*Crushed stone*

REGION II. MIDDLE ATLANTIC

[Retail price indexes—July–September 1939 = 100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1938		1938—Continued		1939—Continued	
January.....	100.0	September.....	100.0	March.....	100.0
February.....	100.0	October.....	100.0	April.....	100.0
March.....	100.0	November.....	100.0	May.....	100.0
April.....	100.0	December.....	100.0	June.....	100.0
May.....	100.0			July.....	100.0
June.....	100.0	1939		August.....	100.0
July.....	100.0	January.....	100.0	September.....	100.0
August.....	100.0	February.....	100.0		

Specification: Stone, crushed, coarse aggregate for concrete, 1½ inches maximum; per ton. (Priced per ton or per yard in accordance with local custom but converted to per ton basis in all cases.)

Retail: Producer to contractor, delivered to job site, city.

TABLE 266.—*Crushed stone*

REGION III. EAST NORTH CENTRAL

[Retail price indexes—July–September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January	110.1	September	102.8	March	95.1
February	110.1	October	102.8	April	95.1
March	110.1	November	102.8	May	91.1
April	110.1	December	102.8	June	91.1
May	110.1			July	91.1
June	110.1	1937		August	91.1
July	110.1	January	111.8	September	91.1
August	106.1	February	111.8	October	95.9
September	106.1	March	111.8	November	95.9
October	106.1	April	111.8	December	95.9
November	104.5	May	111.8		
December	106.9	June	106.1	1939	
1936		July	95.1	January	95.9
January	106.9	August	95.1	February	95.9
February	106.9	September	95.1	March	95.9
March	106.9	October	95.1	April	100.0
April	106.9	November	95.1	May	100.0
May	106.9	December	95.1	June	100.0
June	106.9	1938		July	100.0
July	102.8	January	95.1	August	100.0
August	102.8	February	95.1	September	100.0

Specification: Stone, crushed, coarse aggregate for concrete, $1\frac{1}{2}$ inches maximum; per ton. (Priced per ton or per yard in accordance with local custom but converted to per ton basis in all cases.)

Retail: Producer to contractor, delivered to job site, city.

TABLE 267.—*Crushed stone*

REGION IV. WEST NORTH CENTRAL

[Retail price indexes—July–September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January	92.2	September	96.7	March	101.2
February	92.2	October	96.7	April	101.2
March	92.2	November	96.7	May	101.2
April	92.2	December	96.7	June	101.2
May	92.2			July	101.2
June	92.2	1937		August	101.2
July	92.2	January	101.2	September	101.2
August	92.2	February	101.2	October	101.2
September	92.2	March	101.2	November	101.2
October	92.2	April	101.2	December	101.2
November	92.2	May	101.2		
December	92.2	June	101.2	1939	
1936		July	101.2	January	100.0
January	96.7	August	101.2	February	100.0
February	96.7	September	101.2	March	100.0
March	96.7	October	101.2	April	100.0
April	96.7	November	101.2	May	100.0
May	96.7	December	101.2	June	100.0
June	96.7	1938		July	100.0
July	96.7	January	101.2	August	100.0
August	96.7	February	101.2	September	100.0

Specification: Stone, crushed, coarse aggregate for concrete, $1\frac{1}{2}$ inches maximum; per ton. (Priced per ton or per yard in accordance with local custom but converted to per ton basis in all cases.)

Retail: Producer to contractor, delivered to job site, city.

TABLE 268.—*Crushed stone*

REGION V. SOUTH ATLANTIC

[Retail price indexes—July–September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	100.0	September.....	100.0	March.....	100.0
February.....	100.0	October.....	100.0	April.....	91.5
March.....	100.0	November.....	100.0	May.....	91.5
April.....	100.0	December.....	100.0	June.....	91.5
May.....	100.0			July.....	91.5
June.....	100.0	1937		August.....	91.5
July.....	100.0	January.....	100.0	September.....	91.5
August.....	100.0	February.....	100.0	October.....	91.5
September.....	100.0	March.....	100.0	November.....	91.5
October.....	100.0	April.....	100.0	December.....	91.5
November.....	100.0	May.....	100.0		
December.....	100.0	June.....	100.0	1939	
		July.....	100.0	January.....	91.5
1936		August.....	100.0	February.....	91.5
January.....	100.0	September.....	100.0	March.....	91.5
February.....	100.0	October.....	100.0	April.....	91.5
March.....	100.0	November.....	100.0	May.....	100.0
April.....	100.0	December.....	100.0	June.....	100.0
May.....	100.0			July.....	100.0
June.....	100.0	1938		August.....	100.0
July.....	100.0	January.....	100.0	September.....	100.0
August.....	100.0	February.....	100.0		

Specification: Stone, crushed, coarse aggregate for concrete, 1½ inches maximum, per ton. (Priced per ton or per yard in accordance with local custom but converted to per ton basis in all cases.)

Retail: Producer to contractor, delivered to job site, city.

TABLE 269.—*Crushed stone*

REGION VI. EAST SOUTH CENTRAL

[Retail price indexes—July–September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	100.0	September.....	100.0	March.....	100.0
February.....	100.0	October.....	100.0	April.....	100.0
March.....	100.0	November.....	100.0	May.....	100.0
April.....	100.0	December.....	100.0	June.....	100.0
May.....	100.0			July.....	100.0
June.....	100.0	1937		August.....	100.0
July.....	100.0	January.....	100.0	September.....	100.0
August.....	100.0	February.....	100.0	October.....	100.0
September.....	100.0	March.....	100.0	November.....	100.0
October.....	100.0	April.....	100.0	December.....	100.0
November.....	100.0	May.....	100.0		
December.....	100.0	June.....	100.0	1939	
		July.....	100.0	January.....	100.0
1936		August.....	100.0	February.....	100.0
January.....	100.0	September.....	100.0	March.....	100.0
February.....	100.0	October.....	100.0	April.....	100.0
March.....	100.0	November.....	100.0	May.....	100.0
April.....	100.0	December.....	100.0	June.....	100.0
May.....	100.0			July.....	100.0
June.....	100.0	1938		August.....	100.0
July.....	100.0	January.....	100.0	September.....	100.0
August.....	100.0	February.....	100.0		

Specification: Stone, crushed, coarse aggregate for concrete, 1½ inches maximum; per ton. (Priced per ton or per yard in accordance with local custom but converted to per ton basis in all cases.)

Retail: Producer to contractor, delivered to job site, city.

TABLE 270.—*Crushed stone*

REGION VII. WEST SOUTH CENTRAL

[Retail price indexes—July–September 1939=100.0].

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	91.6	September.....	91.6	March.....	91.6
February.....	91.6	October.....	91.6	April.....	91.6
March.....	91.6	November.....	91.6	May.....	91.6
April.....	91.6	December.....	91.6	June.....	91.6
May.....	91.6			July.....	91.6
June.....	91.6	1937		August.....	91.6
July.....	91.6	January.....	91.6	September.....	91.6
August.....	91.6	February.....	91.6	October.....	91.6
September.....	91.6	March.....	91.6	November.....	91.6
October.....	91.6	April.....	91.6	December.....	100.0
November.....	91.6	May.....	91.6		
December.....	91.6	June.....	91.6	1939	
		July.....	91.6	January.....	100.0
1936		August.....	91.6	February.....	100.0
January.....	91.6	September.....	91.6	March.....	100.0
February.....	91.6	October.....	91.6	April.....	100.0
March.....	91.6	November.....	91.6	May.....	100.0
April.....	91.6	December.....	91.6	June.....	100.0
May.....	91.6			July.....	100.0
June.....	91.6	1938		August.....	100.0
July.....	91.6	January.....	91.6	September.....	100.0
August.....	91.6	February.....	91.6		

Specification: Stone, crushed, coarse aggregate for concrete, $1\frac{1}{2}$ inches maximum; per ton. (Priced per ton or per yard in accordance with local custom but converted to per ton basis in all cases.)

Retail: Producer to contractor, delivered to job site, city.

TABLE 271.—*Crushed stone*

REGION VIII. ROCKY MOUNTAIN

[Retail price indexes—July–September 1939=100.0].

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	100.0	September.....	100.0	March.....	100.0
February.....	100.0	October.....	100.0	April.....	100.0
March.....	100.0	November.....	100.0	May.....	100.0
April.....	100.0	December.....	100.0	June.....	100.0
May.....	100.0			July.....	100.0
June.....	100.0	1937		August.....	100.0
July.....	100.0	January.....	100.0	September.....	100.0
August.....	100.0	February.....	100.0	October.....	100.0
September.....	100.0	March.....	100.0	November.....	100.0
October.....	100.0	April.....	100.0	December.....	100.0
November.....	100.0	May.....	100.0		
December.....	100.0	June.....	100.0	1939	
		July.....	100.0	January.....	100.0
1936		August.....	100.0	February.....	100.0
January.....	100.0	September.....	100.0	March.....	100.0
February.....	100.0	October.....	100.0	April.....	100.0
March.....	100.0	November.....	100.0	May.....	100.0
April.....	100.0	December.....	100.0	June.....	100.0
May.....	100.0			July.....	100.0
June.....	100.0	1938		August.....	100.0
July.....	100.0	January.....	100.0	September.....	100.0
August.....	100.0	February.....	100.0		

Specification: Stone, crushed, coarse aggregate for concrete, $1\frac{1}{2}$ inches maximum; per ton. (Priced per ton or per yard in accordance with local custom but converted to per ton basis in all cases.)

Retail: Producer to contractor, delivered to job site, city.

TABLE 272.—*Crushed stone*

REGION IX. PACIFIC

[Retail price indexes—July–September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	139.2	September.....	116.7	March.....	186.9
February.....	139.2	October.....	116.7	April.....	186.9
March.....	139.2	November.....	113.1	May.....	186.9
April.....	139.2	December.....	117.6	June.....	186.9
May.....	139.2			July.....	186.9
June.....	139.2	1937		August.....	174.8
July.....	139.2	January.....	117.6	September.....	174.8
August.....	130.2	February.....	117.6	October.....	174.8
September.....	130.2	March.....	117.6	November.....	174.8
October.....	134.7	April.....	117.6	December.....	174.8
November.....	161.7	May.....	124.8		
December.....	161.7	June.....	124.8	1939	
		July.....	124.8	January.....	174.8
1936		August.....	150.9	February.....	174.8
January.....	139.2	September.....	150.9	March.....	102.3
February.....	116.7	October.....	155.4	April.....	102.3
March.....	116.7	November.....	155.4	May.....	102.3
April.....	116.7	December.....	186.9	June.....	102.3
May.....	116.7			July.....	102.3
June.....	116.7	1938		August.....	98.9
July.....	116.7	January.....	186.9	September.....	98.9
August.....	116.7	February.....	186.9		

Specification: Stone, crushed, coarse aggregate for concrete, 1½ inches maximum; per ton. (Priced per ton or per yard in accordance with local custom but converted to per ton basis in all cases.)

Retail: Producer to contractor, delivered to job site, city.

TABLE 273.—*Gravel*

COMPOSITE UNITED STATES AVERAGE

[Retail price indexes—July–September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	97.9	September.....	94.0	March.....	101.4
February.....	97.9	October.....	94.0	April.....	101.4
March.....	97.9	November.....	93.6	May.....	101.2
April.....	97.9	December.....	94.1	June.....	101.1
May.....	97.9			July.....	101.1
June.....	97.9	1937		August.....	99.7
July.....	97.9	January.....	93.3	September.....	99.7
August.....	96.8	February.....	93.3	October.....	99.9
September.....	96.6	March.....	93.2	November.....	99.9
October.....	97.1	April.....	93.2	December.....	109.4
November.....	100.5	May.....	93.9		
December.....	100.6	June.....	94.0	1939	
		July.....	93.8	January.....	109.1
1936		August.....	96.7	February.....	109.1
January.....	96.7	September.....	96.7	March.....	100.6
February.....	93.9	October.....	97.2	April.....	100.7
March.....	93.9	November.....	97.2	May.....	100.7
April.....	93.9	December.....	100.7	June.....	100.5
May.....	93.9			July.....	100.3
June.....	94.0	1938		August.....	99.9
July.....	94.1	January.....	101.4	September.....	99.9
August.....	94.0	February.....	101.4		

Specification: Gravel, coarse aggregate for concrete, 1½ inches maximum; per ton. (Priced per ton or per yard in accordance with local custom but converted to per ton basis in all cases.)

Retail: Producer to contractor, delivered to job site, city.

TABLE 274.—*Gravel*

REGION I. NEW ENGLAND

[Retail price indexes—July–September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	111.7	September.....	107.0	March.....	100.0
February.....	111.7	October.....	107.0	April.....	100.0
March.....	111.7	November.....	107.0	May.....	100.0
April.....	111.7	December.....	107.0	June.....	100.0
May.....	111.7			July.....	100.0
June.....	111.7	1937		August.....	100.0
July.....	111.7	January.....	101.3	September.....	100.0
August.....	111.7	February.....	101.3	October.....	100.0
September.....	111.7	March.....	101.3	November.....	100.0
October.....	111.7	April.....	101.3	December.....	100.0
November.....	111.7	May.....	101.3		
December.....	111.7	June.....	100.0	1939	
		July.....	100.0	January.....	100.0
1936		August.....	100.0	February.....	100.0
January.....	107.0	September.....	100.0	March.....	100.0
February.....	107.0	October.....	100.0	April.....	100.0
March.....	107.0	November.....	100.0	May.....	100.0
April.....	107.0	December.....	100.0	June.....	100.0
May.....	107.0			July.....	100.0
June.....	107.0	1938		August.....	100.0
July.....	107.0	January.....	100.0	September.....	100.0
August.....	107.0	February.....	100.0		

Specification: Gravel, coarse aggregate for concrete, 1½ inches maximum; per ton. (Priced per ton or per yard in accordance with local custom but converted to per ton basis in all cases.)

Retail: Producer to contractor, delivered to job site, city.

TABLE 275.—*Gravel*

REGION II. MIDDLE ATLANTIC

[Retail price indexes—July–September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	74.9	September.....	74.9	March.....	78.7
February.....	74.9	October.....	74.9	April.....	78.7
March.....	74.9	November.....	74.9	May.....	78.7
April.....	74.9	December.....	74.9	June.....	78.7
May.....	74.9			July.....	78.7
June.....	74.9	1937		August.....	78.7
July.....	74.9	January.....	74.9	September.....	78.7
August.....	74.9	February.....	74.9	October.....	78.7
September.....	74.9	March.....	74.9	November.....	78.7
October.....	74.9	April.....	74.9	December.....	100.0
November.....	74.9	May.....	74.9		
December.....	74.9	June.....	74.9	1939	
		July.....	74.9	January.....	100.0
1936		August.....	74.9	February.....	100.0
January.....	74.9	September.....	74.9	March.....	100.0
February.....	74.9	October.....	74.9	April.....	100.0
March.....	74.9	November.....	74.9	May.....	100.0
April.....	74.9	December.....	74.9	June.....	100.0
May.....	74.9			July.....	100.0
June.....	74.9	1938		August.....	100.0
July.....	74.9	January.....	78.7	September.....	100.0
August.....	74.9	February.....	78.7		

Specification: Gravel, coarse aggregate for concrete, 1½ inches maximum; per ton. (Priced per ton or per yard in accordance with local custom but converted to per ton basis in all cases.)

Retail: Producer to contractor, delivered to job site, city.

TABLE 276.—*Gravel*

REGION III. EAST NORTH CENTRAL

[Retail price indexes—July–September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	119.4	September.....	111.3	March.....	100.0
February.....	119.4	October.....	111.3	April.....	100.0
March.....	119.4	November.....	111.3	May.....	98.2
April.....	119.4	December.....	111.3	June.....	98.2
May.....	119.4			July.....	98.2
June.....	119.4	1937		August.....	98.2
July.....	119.4	January.....	107.3	September.....	98.2
August.....	119.4	February.....	107.3	October.....	99.7
September.....	117.6	March.....	106.7	November.....	99.7
October.....	117.6	April.....	106.7	December.....	99.7
November.....	118.2	May.....	106.2		
December.....	118.8	June.....	107.3	1939	
		July.....	105.7	January.....	99.7
1936		August.....	105.7	February.....	99.7
January.....	111.3	September.....	105.7	March.....	99.7
February.....	111.3	October.....	105.7	April.....	100.0
March.....	111.3	November.....	105.7	May.....	100.0
April.....	111.3	December.....	105.7	June.....	100.0
May.....	111.3			July.....	100.0
June.....	111.3	1938		August.....	100.0
July.....	111.3	January.....	100.0	September.....	100.0
August.....	111.3	February.....	100.0		

Specification: Gravel, coarse aggregate for concrete, 1½ inches maximum; per ton. (Priced per ton or per yard in accordance with local custom but converted to per ton basis in all cases.)

Retail: Producer to contractor, delivered to job site, city.

TABLE 277.—*Gravel*

REGION IV. WEST NORTH CENTRAL

[Retail price indexes—July–September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	94.7	September.....	98.6	March.....	100.6
February.....	94.7	October.....	98.6	April.....	100.6
March.....	94.7	November.....	98.6	May.....	100.6
April.....	94.7	December.....	98.6	June.....	100.6
May.....	94.7			July.....	100.6
June.....	94.7	1937		August.....	100.6
July.....	94.7	January.....	100.6	September.....	100.6
August.....	94.7	February.....	100.6	October.....	100.6
September.....	94.7	March.....	100.6	November.....	100.6
October.....	94.7	April.....	100.6	December.....	100.6
November.....	94.7	May.....	100.6		
December.....	94.7	June.....	100.6	1939	
		July.....	100.6	January.....	100.0
1936		August.....	100.6	February.....	100.0
January.....	98.6	September.....	100.6	March.....	100.0
February.....	98.6	October.....	100.6	April.....	100.0
March.....	98.6	November.....	100.6	May.....	100.0
April.....	98.6	December.....	100.6	June.....	100.0
May.....	98.6			July.....	100.0
June.....	98.6	1938		August.....	100.0
July.....	98.6	January.....	100.6	September.....	100.0
August.....	98.6	February.....	100.6		

Specification: Gravel, coarse aggregate for concrete, 1½ inches maximum; per ton. (Priced per ton or per yard in accordance with local custom but converted to per ton basis in all cases.)

Retail: Producer to contractor, delivered to job site, city.

TABLE 278.—*Gravel*

REGION V. SOUTH ATLANTIC

[Retail price indexes—July–September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January	99.6	September	100.0	March	101.2
February	99.6	October	100.0	April	101.2
March	99.6	November	100.0	May	101.2
April	99.6	December	100.0	June	101.2
May	99.6			July	101.2
June	99.6	1937		August	101.2
July	99.6	January	101.2	September	101.2
August	99.6	February	101.2	October	101.2
September	99.6	March	101.2	November	101.2
October	99.6	April	101.2	December	101.2
November	99.6	May	101.2		
December	99.6	June	101.2	1939	
1936		July	101.2	January	101.2
January	100.0	August	101.2	February	101.2
February	100.0	September	101.2	March	101.2
March	100.0	October	101.2	April	101.2
April	100.0	November	101.2	May	101.2
May	100.0	December	101.2	June	100.0
June	100.0			July	100.0
July	100.0	1938		August	100.0
August	100.0	January	101.2	September	100.0
		February	101.2		

Specification: Gravel, coarse aggregate for concrete, $1\frac{1}{2}$ inches maximum; per ton. (Priced per ton or per yard in accordance with local custom but converted to per ton basis in all cases.)

Retail: Producer to contractor, delivered to job site, city.

TABLE 279.—*Gravel*

REGION VI. EAST SOUTH CENTRAL

[Retail price indexes—July–September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January	100.0	September	100.0	March	100.0
February	100.0	October	100.0	April	100.0
March	100.0	November	100.0	May	100.0
April	100.0	December	100.0	June	100.0
May	100.0			July	100.0
June	100.0	1937		August	100.0
July	100.0	January	100.0	September	100.0
August	100.0	February	100.0	October	100.0
September	100.0	March	100.0	November	100.0
October	100.0	April	100.0	December	100.0
November	100.0	May	100.0		
December	100.0	June	100.0	1939	
1936		July	100.0	January	100.0
January	100.0	August	100.0	February	100.0
February	100.0	September	100.0	March	100.0
March	100.0	October	100.0	April	100.0
April	100.0	November	100.0	May	100.0
May	100.0	December	100.0	June	100.0
June	100.0			July	100.0
July	100.0	1938		August	100.0
August	100.0	January	100.0	September	100.0
		February	100.0		

Specification: Gravel, coarse aggregate for concrete, $1\frac{1}{2}$ inches maximum; per ton. (Priced per ton or per yard in accordance with local custom but converted to per ton basis in all cases.)

Retail: Producer to contractor, delivered to job site, city.

TABLE 280.—*Gravel*

REGION VII. WEST SOUTH CENTRAL

[Retail price indexes—July–September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	110.5	September.....	107.9	March.....	104.9
February.....	110.5	October.....	107.9	April.....	104.9
March.....	110.5	November.....	107.9	May.....	104.9
April.....	110.5	December.....	107.9	June.....	104.9
May.....	110.5	1937		July.....	104.9
June.....	110.5	January.....	106.3	August.....	104.9
July.....	110.5	February.....	106.3	September.....	104.9
August.....	110.5	March.....	106.3	October.....	104.9
September.....	110.5	April.....	106.3	November.....	104.9
October.....	110.5	May.....	106.3	December.....	104.9
November.....	110.5	June.....	106.3	1939	
December.....	110.5	July.....	106.3	January.....	103.3
1936		August.....	106.3	February.....	103.3
January.....	107.9	September.....	106.3	March.....	103.3
February.....	107.9	October.....	106.3	April.....	103.3
March.....	107.9	November.....	106.3	May.....	103.3
April.....	107.9	December.....	106.3	June.....	103.3
May.....	107.9	1938		July.....	100.0
June.....	107.9	January.....	104.9	August.....	100.0
July.....	107.9	February.....	104.9	September.....	100.0
August.....	107.9				

Specification: Gravel, coarse aggregate for concrete, 1½ inches, maximum; per ton. (Priced per ton or per yard in accordance with local custom but converted to per ton basis in all cases.)

Retail: Producer to contractor, delivered to job site, city.

TABLE 281.—*Gravel*

REGION VIII. ROCKY MOUNTAIN

[Retail price indexes—July–September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	105.5	September.....	104.2	March.....	102.1
February.....	105.5	October.....	104.2	April.....	102.1
March.....	105.5	November.....	104.2	May.....	102.1
April.....	105.5	December.....	104.2	June.....	100.0
May.....	105.5	1937		July.....	100.0
June.....	105.5	January.....	102.1	August.....	100.0
July.....	105.5	February.....	102.1	September.....	100.0
August.....	105.5	March.....	102.1	October.....	100.0
September.....	105.5	April.....	102.1	November.....	100.0
October.....	105.5	May.....	102.1	December.....	100.0
November.....	105.5	June.....	102.1	1939	
December.....	105.5	July.....	102.1	January.....	100.0
1936		August.....	102.1	February.....	100.0
January.....	105.5	September.....	102.1	March.....	100.0
February.....	105.5	October.....	102.1	April.....	100.0
March.....	105.5	November.....	102.1	May.....	100.0
April.....	105.5	December.....	102.1	June.....	100.0
May.....	105.5	1938		July.....	100.0
June.....	106.9	January.....	102.1	August.....	100.0
July.....	106.9	February.....	102.1	September.....	100.0
August.....	104.2				

Specification: Gravel, coarse aggregate for concrete, 1½ inches maximum; per ton. (Priced per ton or per yard in accordance with local custom but converted to per ton basis in all cases.)

Retail: Producer to contractor, delivered to job site, city.

TABLE 282.—*Gravel*

REGION IX. PACIFIC

[Retail price indexes—July–September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	145.8	September.....	122.9	March.....	188.9
February.....	145.8	October.....	122.9	April.....	188.9
March.....	145.8	November.....	119.5	May.....	188.9
April.....	145.8	December.....	123.8	June.....	188.9
May.....	145.8			July.....	188.9
June.....	145.8	1937		August.....	176.8
July.....	145.8	January.....	122.3	September.....	176.8
August.....	136.3	February.....	122.3	October.....	176.8
September.....	136.3	March.....	122.3	November.....	176.8
October.....	141.1	April.....	122.3	December.....	176.8
November.....	169.5	May.....	129.2		
December.....	169.5	June.....	129.2	1939	
		July.....	129.2	January.....	175.4
1936		August.....	154.3	February.....	175.4
January.....	145.8	September.....	154.3	March.....	102.7
February.....	122.1	October.....	158.6	April.....	102.7
March.....	122.1	November.....	158.6	May.....	102.7
April.....	122.1	December.....	188.9	June.....	102.7
May.....	122.1			July.....	102.7
June.....	122.1	1938		August.....	99.2
July.....	122.9	January.....	188.9	September.....	98.9
August.....	122.9	February.....	188.9		

Specification: Gravel, coarse aggregate for concrete, 1½ inches maximum; per ton. (Priced per ton or per yard in accordance with local custom but converted to per ton basis in all cases.)

Retail: Producer to contractor, delivered to job site, city.

TABLE 283.—*Sand*

COMPOSITE UNITED STATES AVERAGE

[Retail price indexes—July–September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	98.0	September.....	95.8	March.....	100.2
February.....	98.0	October.....	95.7	April.....	99.8
March.....	98.0	November.....	95.7	May.....	99.9
April.....	98.0	December.....	95.7	June.....	99.5
May.....	98.0			July.....	99.6
June.....	98.0	1937		August.....	98.3
July.....	98.5	January.....	94.8	September.....	98.3
August.....	97.3	February.....	94.8	October.....	98.3
September.....	97.2	March.....	94.8	November.....	98.3
October.....	96.9	April.....	94.5	December.....	98.5
November.....	97.5	May.....	94.5		
December.....	97.5	June.....	95.7	1939	
		July.....	95.8	January.....	98.4
1936		August.....	98.4	February.....	98.4
January.....	95.7	September.....	98.4	March.....	101.3
February.....	95.7	October.....	98.9	April.....	101.4
March.....	95.7	November.....	98.9	May.....	101.8
April.....	95.7	December.....	101.4	June.....	101.7
May.....	95.7			July.....	100.0
June.....	95.7	1938		August.....	100.0
July.....	95.7	January.....	100.6	September.....	100.0
August.....	95.8	February.....	100.6		

Specification: Sand, concrete, ½-inch maximum, No. 6 mesh screen; per ton. (Priced per ton or per yard in accordance with local custom but converted to per ton basis in all cases.)

Retail: Producer to contractor, delivered to job site, city

TABLE 284.—*Sand*

REGION I. NEW ENGLAND

[Retail price indexes—July–September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	114.8	September.....	107.3	March.....	100.0
February.....	114.8	October.....	107.3	April.....	100.0
March.....	114.8	November.....	107.3	May.....	100.0
April.....	114.8	December.....	107.3	June.....	100.0
May.....	114.8			July.....	100.0
June.....	114.8	1937		August.....	100.0
July.....	114.8	January.....	100.0	September.....	100.0
August.....	114.8	February.....	100.0	October.....	100.0
September.....	114.8	March.....	100.0	November.....	100.0
October.....	114.8	April.....	100.0	December.....	100.0
November.....	114.8	May.....	100.0		
December.....	114.8	June.....	100.0	1939	
		July.....	100.0	January.....	100.0
1936		August.....	100.0	February.....	100.0
January.....	107.3	September.....	100.0	March.....	100.0
February.....	107.3	October.....	100.0	April.....	100.0
March.....	107.3	November.....	100.0	May.....	100.0
April.....	107.3	December.....	100.0	June.....	100.0
May.....	107.3			July.....	100.0
June.....	107.3	1938		August.....	100.0
July.....	107.3	January.....	100.0	September.....	100.0
August.....	107.3	February.....	100.0		

Specification: Sand, concrete, $\frac{1}{2}$ inch maximum, No. 6 mesh screen; per ton. (Priced per ton or per yard in accordance with local custom but converted to per ton basis in all cases.)

Retail: Producer to contractor, delivered to job site, city.

TABLE 285.—*Sand*

REGION II. MIDDLE ATLANTIC

[Retail price indexes—July–September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	79.1	September.....	79.1	March.....	81.6
February.....	79.1	October.....	79.1	April.....	81.6
March.....	79.1	November.....	79.1	May.....	81.6
April.....	79.1	December.....	79.1	June.....	81.6
May.....	79.1			July.....	81.6
June.....	79.1	1937		August.....	81.6
July.....	79.1	January.....	79.1	September.....	81.6
August.....	79.1	February.....	79.1	October.....	81.6
September.....	79.1	March.....	79.1	November.....	81.6
October.....	79.1	April.....	79.1	December.....	81.6
November.....	79.1	May.....	79.1		
December.....	79.1	June.....	81.6	1939	
		July.....	81.6	January.....	81.6
1936		August.....	81.6	February.....	81.6
January.....	79.1	September.....	81.6	March.....	100.0
February.....	79.1	October.....	81.6	April.....	100.0
March.....	79.1	November.....	81.6	May.....	100.0
April.....	79.1	December.....	81.6	June.....	100.0
May.....	79.1			July.....	100.0
June.....	79.1	1938		August.....	100.0
July.....	79.1	January.....	81.6	September.....	100.0
August.....	79.1	February.....	81.6	October.....	100.0

Specification: Sand, concrete, $\frac{1}{2}$ -inch maximum, No. 6 mesh screen; per ton. (Priced per ton or per yard in accordance with local custom but converted to per ton basis in all cases.)

Retail: Producer to contractor, delivered to job site, city.

TABLE 286.—*Sand*
REGION III. EAST NORTH CENTRAL
[Retail price indexes—July–September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	122.3	September.....	112.3	March.....	99.1
February.....	122.3	October.....	112.3	April.....	99.1
March.....	122.3	November.....	112.3	May.....	99.7
April.....	122.3	December.....	112.3	June.....	98.2
May.....	122.3			July.....	99.1
June.....	122.3	1937		August.....	99.1
July.....	122.3	January.....	107.3	September.....	99.1
August.....	120.8	February.....	107.3	October.....	99.1
September.....	120.8	March.....	107.3	November.....	99.1
October.....	119.0	April.....	105.5	December.....	99.1
November.....	119.0	May.....	105.5		
December.....	119.0	June.....	105.5	1939	
1936		July.....	106.5	January.....	99.4
January.....	112.3	August.....	106.5	February.....	99.4
February.....	112.3	September.....	106.5	March.....	99.4
March.....	112.3	October.....	106.5	April.....	100.0
April.....	112.3	November.....	106.5	May.....	100.0
May.....	112.3	December.....	106.5	June.....	100.0
June.....	112.3			July.....	100.0
July.....	112.3	1938		August.....	100.0
August.....	112.3	January.....	101.5	September.....	100.0
		February.....	101.5		

Specification: Sand, concrete, $\frac{1}{2}$ inch maximum, No. 6 mesh screen; per ton. (Priced per ton or per yard in accordance with local custom but converted to per ton basis in all cases.)

Retail: Producer to contractor, delivered to job site, city.

TABLE 287.—*Sand*
REGION IV. WEST NORTH CENTRAL
[Retail price indexes—July–September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	86.2	September.....	97.8	March.....	100.3
February.....	86.2	October.....	97.8	April.....	100.3
March.....	86.2	November.....	97.8	May.....	100.3
April.....	86.2	December.....	97.8	June.....	100.3
May.....	86.2			July.....	100.3
June.....	86.2	1937		August.....	100.3
July.....	86.2	January.....	100.7	September.....	100.3
August.....	86.2	February.....	100.7	October.....	100.3
September.....	86.2	March.....	100.7	November.....	100.3
October.....	86.2	April.....	100.7	December.....	100.3
November.....	86.2	May.....	100.7		
December.....	86.2	June.....	100.7	1939	
1936		July.....	100.7	January.....	100.0
January.....	97.8	August.....	100.7	February.....	100.0
February.....	97.8	September.....	100.7	March.....	100.0
March.....	97.8	October.....	101.0	April.....	100.0
April.....	97.8	November.....	100.7	May.....	100.0
May.....	97.8	December.....	100.7	June.....	100.0
June.....	97.8			July.....	100.0
July.....	97.8	1938		August.....	100.0
August.....	97.8	January.....	100.3	September.....	100.0
		February.....	100.3		

Specification: Sand, concrete, $\frac{1}{4}$ -inch maximum, No. 6 mesh screen; per ton. (Priced per ton or per yard in accordance with local custom but converted to per ton basis in all cases.)

Retail: Producer to contractor, delivered to job site, city.

TABLE 288.—*Sand*

REGION V. SOUTH ATLANTIC

[Retail price indexes—July–September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	103.4	September.....	102.6	March.....	101.1
February.....	103.4	October.....	102.6	April.....	97.4
March.....	103.4	November.....	102.6	May.....	97.4
April.....	103.4	December.....	102.6	June.....	97.4
May.....	103.4			July.....	97.4
June.....	103.4	1937		August.....	97.4
July.....	103.4	January.....	101.1	September.....	97.4
August.....	103.4	February.....	101.1	October.....	97.4
September.....	102.6	March.....	101.1	November.....	97.4
October.....	102.6	April.....	101.1	December.....	97.4
November.....	102.6	May.....	101.1		
December.....	102.6	June.....	101.3	1939	
		July.....	101.3	January.....	97.4
1936		August.....	101.3	February.....	97.4
January.....	102.6	September.....	101.3	March.....	97.4
February.....	102.6	October.....	101.3	April.....	97.4
March.....	102.6	November.....	101.3	May.....	101.1
April.....	102.6	December.....	101.3	June.....	100.0
May.....	102.6			July.....	100.0
June.....	102.6	1938		August.....	100.0
July.....	102.6	January.....	101.1	September.....	100.0
August.....	102.6	February.....	101.1		

Specification: Sand, concrete, $\frac{1}{2}$ inch maximum, No. 6 mesh screen; per ton. (Priced per ton or per yard in accordance with local custom but converted to per ton basis in all cases.)

Retail: Producer to contractor, delivered to job site, city.

TABLE 289.—*Sand*

REGION VI. EAST SOUTH CENTRAL

[Retail price indexes—July–September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	100.0	September.....	100.0	March.....	100.0
February.....	100.0	October.....	100.0	April.....	100.0
March.....	100.0	November.....	100.0	May.....	100.0
April.....	100.0	December.....	100.0	June.....	100.0
May.....	100.0			July.....	100.0
June.....	100.0	1937		August.....	100.0
July.....	100.0	January.....	100.0	September.....	100.0
August.....	100.0	February.....	100.0	October.....	100.0
September.....	100.0	March.....	100.0	November.....	100.0
October.....	100.0	April.....	100.0	December.....	100.0
November.....	100.0	May.....	100.0		
December.....	100.0	June.....	100.0	1939	
		July.....	100.0	January.....	100.0
1936		August.....	100.0	February.....	100.0
January.....	100.0	September.....	100.0	March.....	100.0
February.....	100.0	October.....	100.0	April.....	100.0
March.....	100.0	November.....	100.0	May.....	100.0
April.....	100.0	December.....	100.0	June.....	100.0
May.....	100.0			July.....	100.0
June.....	100.0	1938		August.....	100.0
July.....	100.0	January.....	100.0	September.....	100.0
August.....	100.0	February.....	100.0		

Specification: Sand, concrete, $\frac{1}{2}$ inch maximum, No. 6 mesh screen; per ton. (Priced per ton or per yard in accordance with local custom but converted to per ton basis in all cases.)

Retail: Producer to contractor, delivered to job site, city.

TABLE 290.—*Sand*
REGION VII. WEST SOUTH CENTRAL
[Retail price indexes—July–September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	123.7	September.....	123.7	March.....	123.7
February.....	123.7	October.....	123.7	April.....	123.7
March.....	123.7	November.....	123.7	May.....	123.7
April.....	123.7	December.....	123.7	June.....	123.7
May.....	123.7			July.....	123.7
June.....	123.7	1937		August.....	123.7
July.....	123.7	January.....	123.7	September.....	123.7
August.....	123.7	February.....	123.7	October.....	123.7
September.....	123.7	March.....	123.7	November.....	123.7
October.....	123.7	April.....	123.7	December.....	127.2
November.....	123.7	May.....	123.7		
December.....	123.7	June.....	123.7	1939	
1936		July.....	123.7	January.....	127.2
January.....	123.7	August.....	123.7	February.....	127.2
February.....	123.7	September.....	123.7	March.....	127.2
March.....	123.7	October.....	123.7	April.....	127.2
April.....	123.7	November.....	123.7	May.....	127.2
May.....	123.7	December.....	123.7	June.....	127.2
June.....	123.7			July.....	100.0
July.....	123.7	1938		August.....	100.0
August.....	123.7	January.....	123.7	September.....	100.0
		February.....	123.7		

Specification: Sand, concrete, $\frac{1}{2}$ inch maximum, No. 6 mesh screen; per ton. (Priced per ton or per yard in accordance with local custom but converted to per ton basis in all cases.)

Retail: Producer to contractor, delivered to job site, city.

TABLE 291.—*Sand*
REGION VIII. ROCKY MOUNTAIN
[Retail price indexes—July–September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	109.5	September.....	109.5	March.....	104.8
February.....	109.5	October.....	105.9	April.....	104.8
March.....	109.5	November.....	105.9	May.....	104.8
April.....	109.5	December.....	105.9	June.....	100.0
May.....	109.5			July.....	100.0
June.....	109.5	1937		August.....	100.0
July.....	109.5	January.....	104.8	September.....	100.0
August.....	109.5	February.....	104.8	October.....	100.0
September.....	109.5	March.....	104.8	November.....	100.0
October.....	109.5	April.....	104.8	December.....	100.0
November.....	109.5	May.....	104.8		
December.....	109.5	June.....	104.8	1939	
1936		July.....	104.8	January.....	100.0
January.....	109.5	August.....	104.8	February.....	100.0
February.....	109.5	September.....	104.8	March.....	100.0
March.....	109.5	October.....	104.8	April.....	100.0
April.....	109.5	November.....	104.8	May.....	100.0
May.....	109.5	December.....	104.8	June.....	100.0
June.....	109.5			July.....	100.0
July.....	109.5	1938		August.....	100.0
August.....	109.5	January.....	104.8	September.....	100.0
		February.....	104.8		

Specification: Sand, concrete, $\frac{1}{2}$ -inch maximum, No. 6 mesh screen; per ton. (Priced per ton or per yard in accordance with local custom but converted to per ton basis in all cases.)

Retail: Producer to contractor, delivered to job site, city.

TABLE 292.—*Sand*
REGION IX. PACIFIC

[Retail price indexes—July–September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	116.8	August.....	109.2	February.....	157.9
February.....	116.8	September.....	109.2	March.....	157.9
March.....	116.8	October.....	108.2	April.....	157.9
April.....	116.8	November.....	109.2	May.....	157.9
May.....	116.8	December.....	109.2	June.....	157.9
June.....	116.8			July.....	157.9
July.....	121.0	1937		August.....	146.2
August.....	112.6	January.....	110.0	September.....	146.2
September.....	112.6	February.....	110.0	October.....	146.2
October.....	112.6	March.....	110.0	November.....	146.2
November.....	117.6	April.....	110.0	December.....	146.2
December.....	117.6	May.....	110.0		
1936		June.....	110.0	1939	
January.....	108.4	July.....	110.0	January.....	145.3
February.....	108.4	August.....	132.7	February.....	145.3
March.....	108.4	September.....	132.7	March.....	100.0
April.....	108.4	October.....	136.9	April.....	100.0
May.....	108.4	November.....	136.9	May.....	100.0
June.....	108.4	December.....	157.9	June.....	100.0
July.....	108.4			July.....	100.0
		1938		August.....	100.0
		January.....	157.9	September.....	100.0

Specification: Sand, concrete, ½-inch maximum, No. 6 mesh screen; per ton. (Priced per ton or per yard in accordance with local custom but converted to per ton basis in all cases.)

Retail: Producer to contractor, delivered to job site, city.

CHAPTER XXV

READY-MIXED CONCRETE

The ready-mixed concrete industry is a development of the past decade and particularly of the last 5 years. An increasing proportion of sand and gravel—two of the basic ingredients of concrete—has been sold to ready-mixed concrete producers rather than contractors. Many sand and gravel producers have added a “ready-mix” service to their business.

Price Levels.

Prices on the 1-3-5 mix,¹ reported from 43 cities, ranged from \$5 to \$11 per cubic yard. In 21 cities, however, the prices varied only narrowly, from \$6 to \$7. The distribution follows:

Range of typical prices (dollars per ton)	Number of cities	Range of typical prices (dollars per ton)	Number of cities
\$5.01 to \$5.50	4	\$7.51 to \$8.	6
\$5.51 to \$6.	3	\$8.01 and over	1
\$6.01 to \$6.50	11		
\$6.51 to \$7.	10	Total	43
\$7.01 to \$7.50	8		

Marked regional variations are noted. In the Pacific area, the average of typical prices was \$5.85 per cubic yard, while in the Middle Atlantic, South Atlantic, and East South Central regions the averages were over \$7. The regional differentials are shown in the following summary:

Region	Average of typical prices (dollars per cubic yard)	Region	Average of typical prices (dollars per cubic yard)
I. New England	\$6. 65	VI. East South Central	\$7. 18
II. Middle Atlantic	7. 45	VII. West South Central	6. 78
III. East North Central	6. 51	VIII. Rocky Mountain	6. 84
IV. West North Central	6. 48	IX. Pacific	5. 85
V. South Atlantic	7. 29		

Price Trends. (See chart XLI and tables 293 to 302.)

The national composite index fell gradually from its mid-1935 level of 106 percent of the July to September 1939 average to the base level of 100 in 1939. Prices in the New England, the Middle Atlantic, West North Central, East South Central, and West South Central areas followed this general pattern of relative stability, although the latter four regions showed moderate increases rather than declines during the period.

¹ 1 part cement, 3 sand, and 5 gravel. This is a standard mix for light construction.

In the East North Central area the index was steady, except for a slight drop in 1935 and recovery in 1936, until late in 1937 and early in 1938, when a series of declines occurred aggregating 13 percent. A similar pattern of price changes was reported in the South Atlantic area, although the drop started earlier in 1937. In the Rocky Mountain region, only one change was reported during the 5-year period, a 7-percent drop in January 1938. In the Pacific area, the index rose from 115 to 127 in 1935, then dropped back to 115 and remained at this level until October 1938; three successive price reductions then brought the index down to 100 in May 1939.

TABLE 293.—*Ready-mixed concrete, 1-3-5*

COMPOSITE UNITED STATES AVERAGE

[Retail price indexes—July–September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	104.0	September.....	104.1	March.....	103.1
February.....	104.0	October.....	104.1	April.....	102.2
March.....	104.8	November.....	104.1	May.....	102.2
April.....	104.8	December.....	104.1	June.....	102.2
May.....	105.4			July.....	101.1
June.....	105.4	1937		August.....	101.1
July.....	104.8	January.....	103.7	September.....	101.1
August.....	105.2	February.....	103.7	October.....	100.4
September.....	104.9	March.....	103.7	November.....	100.9
October.....	104.9	April.....	103.7	December.....	100.9
November.....	104.9	May.....	102.8		
December.....	104.9	June.....	102.8	1939	
		July.....	102.8	January.....	100.6
1936		August.....	102.8	February.....	100.7
January.....	103.5	September.....	102.8	March.....	100.3
February.....	103.5	October.....	102.5	April.....	100.6
March.....	103.5	November.....	102.5	May.....	99.8
April.....	103.5	December.....	102.5	June.....	99.8
May.....	104.1			July.....	99.8
June.....	104.1	1938		August.....	100.1
July.....	104.1	January.....	103.1	September.....	100.1
August.....	104.1	February.....	103.1		

Specification: Concrete, 1-3-5, ready-mixed, portland cement; per yard.

Retail: Producer to contractor, delivered to job site, city.

CHART XLI

READY MIXED CONCRETE 1-3-5

RETAIL PRICE INDEXES

JULY - SEPTEMBER 1939 = 100

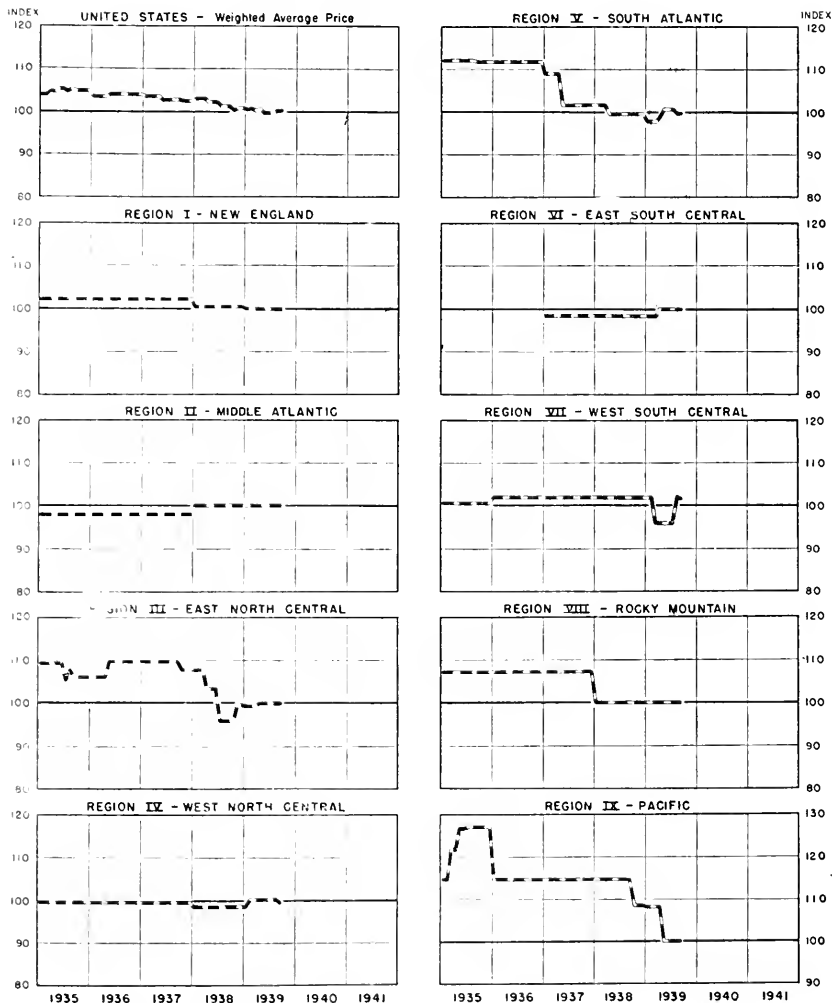


TABLE 294.—*Ready-mixed concrete, 1-3-5*

REGION I. NEW ENGLAND

[Retail price indexes—July-September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	102.1	September.....	102.1	March.....	100.4
February.....	102.1	October.....	102.1	April.....	100.4
March.....	102.1	November.....	102.1	May.....	100.4
April.....	102.1	December.....	102.1	June.....	100.4
May.....	102.1	1937		July.....	100.4
June.....	102.1	January.....	102.1	August.....	100.4
July.....	102.1	February.....	102.1	September.....	100.4
August.....	102.1	March.....	102.1	October.....	100.4
September.....	102.1	April.....	102.1	November.....	100.4
October.....	102.1	May.....	102.1	December.....	100.4
November.....	102.1	June.....	102.1	1939	
December.....	102.1	July.....	102.1	January.....	100.0
1936		August.....	102.1	February.....	100.0
January.....	102.1	September.....	102.1	March.....	100.0
February.....	102.1	October.....	102.1	April.....	100.0
March.....	102.1	November.....	102.1	May.....	100.0
April.....	102.1	December.....	102.1	June.....	100.0
May.....	102.1	1938		July.....	100.0
June.....	102.1	January.....	100.4	August.....	100.0
July.....	102.1	February.....	100.4	September.....	100.0
August.....	102.1				

Specification: Concrete, 1-3-5, ready-mixed, portland cement; per yard.

Retail: Producer to contractor, delivered to job site, city.

TABLE 295.—*Ready-mixed concrete, 1-3-5*

REGION II. MIDDLE ATLANTIC

[Retail price indexes—July-September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	98.0	September.....	98.0	March.....	100.0
February.....	98.0	October.....	98.0	April.....	100.0
March.....	98.0	November.....	98.0	May.....	100.0
April.....	98.0	December.....	98.0	June.....	100.0
May.....	98.0	1937		July.....	100.0
June.....	98.0	January.....	98.0	August.....	100.0
July.....	98.0	February.....	98.0	September.....	100.0
August.....	98.0	March.....	98.0	October.....	100.0
September.....	98.0	April.....	98.0	November.....	100.0
October.....	98.0	May.....	98.0	December.....	100.0
November.....	98.0	June.....	98.0	1939	
December.....	98.0	July.....	98.0	January.....	100.0
1936		August.....	98.0	February.....	100.0
January.....	98.0	September.....	98.0	March.....	100.0
February.....	98.0	October.....	98.0	April.....	100.0
March.....	98.0	November.....	98.0	May.....	100.0
April.....	98.0	December.....	98.0	June.....	100.0
May.....	98.0	1938		July.....	100.0
June.....	98.0	January.....	100.0	August.....	100.0
July.....	98.0	February.....	100.0	September.....	100.0
August.....	98.0				

Specification: Concrete, 1-3-5, ready-mixed, portland cement; per yard.

Retail: Producer to contractor, delivered to job site, city.

TABLE 296.—*Ready-mixed concrete, 1-3-5*

REGION III. EAST NORTH CENTRAL

[Retail price indexes—July-September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	109.5	September.....	109.9	March.....	107.8
February.....	109.5	October.....	109.9	April.....	103.4
March.....	109.5	November.....	109.9	May.....	103.4
April.....	109.5	December.....	109.9	June.....	103.4
May.....	109.5			July.....	96.0
June.....	109.5	1937		August.....	96.0
July.....	105.4	January.....	109.9	September.....	96.0
August.....	107.8	February.....	109.9	October.....	96.0
September.....	106.2	March.....	109.9	November.....	99.7
October.....	106.2	April.....	109.9	December.....	99.7
November.....	106.2	May.....	109.9		
December.....	106.2	June.....	109.9	1939	
1936		July.....	109.9	January.....	99.4
January.....	106.2	August.....	109.9	February.....	99.4
February.....	106.2	September.....	109.9	March.....	99.4
March.....	106.2	October.....	107.8	April.....	100.0
April.....	106.2	November.....	107.8	May.....	100.0
May.....	109.9	December.....	107.8	June.....	100.0
June.....	109.9	1938		July.....	100.0
July.....	109.9	January.....	107.8	August.....	100.0
August.....	109.9	February.....	107.8	September.....	100.0

Specification: Concrete, 1-3-5, ready-mixed, portland cement; per yard.
 Retail: Producer to contractor, delivered to job site, city.

TABLE 297.—*Ready-mixed concrete, 1-3-5*

REGION IV. WEST NORTH CENTRAL

[Retail price indexes—July-September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	99.6	September.....	99.6	March.....	98.6
February.....	99.6	October.....	99.6	April.....	98.6
March.....	99.6	November.....	99.6	May.....	98.6
April.....	99.6	December.....	99.6	June.....	98.6
May.....	99.6			July.....	98.6
June.....	99.6	1937		August.....	98.6
July.....	99.6	January.....	99.6	September.....	98.6
August.....	99.6	February.....	99.6	October.....	98.6
September.....	99.6	March.....	99.6	November.....	98.6
October.....	99.6	April.....	99.6	December.....	98.6
November.....	99.6	May.....	99.6		
December.....	99.6	June.....	99.6	1939	
1936		July.....	99.6	January.....	98.6
January.....	99.6	August.....	99.6	February.....	100.1
February.....	99.6	September.....	99.6	March.....	100.1
March.....	99.6	October.....	99.6	April.....	100.1
April.....	99.6	November.....	99.6	May.....	100.1
May.....	99.6	December.....	99.6	June.....	100.1
June.....	99.6	1938		July.....	100.1
July.....	99.6	January.....	98.6	August.....	100.1
August.....	99.6	February.....	98.6	September.....	99.7

Specification: Concrete, 1-3-5, ready-mixed, portland cement; per yard.
 Retail: Producer to contractor, delivered to job site, city.

TABLE 298.—*Ready-mixed concrete, 1-3-5*

REGION V. SOUTH ATLANTIC

[Retail price indexes—July-September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	112.1	September.....	111.9	March.....	101.7
February.....	112.1	October.....	111.9	April.....	99.5
March.....	112.1	November.....	111.9	May.....	99.5
April.....	112.1	December.....	111.9	June.....	99.5
May.....	112.1			July.....	99.5
June.....	112.1	1937		August.....	99.5
July.....	112.1	January.....	109.0	September.....	99.5
August.....	112.1	February.....	109.0	October.....	99.5
September.....	111.9	March.....	109.0	November.....	99.5
October.....	111.9	April.....	109.0	December.....	99.5
November.....	111.9	May.....	101.7		
December.....	111.9	June.....	101.7	1939	
1936		July.....	101.7	January.....	97.8
January.....	111.9	August.....	101.7	February.....	97.8
February.....	111.9	September.....	101.7	March.....	97.8
March.....	111.9	October.....	101.7	April.....	98.8
April.....	111.9	November.....	101.7	May.....	100.6
May.....	111.9	December.....	101.7	June.....	100.6
June.....	111.9			July.....	100.6
July.....	111.9	1938		August.....	99.7
August.....	111.9	January.....	101.7	September.....	99.7
		February.....	101.7		

Specification: Concrete, 1-3-5, ready-mixed, portland cement; per yard.

Retail: Producer to contractor, delivered to job site, city.

TABLE 299.—*Ready-mixed concrete, 1-3-5*

REGION VI. EAST SOUTH CENTRAL

[Retail price indexes—July-September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1937		1938		1939	
January.....	98.4	January.....	98.4	January.....	98.4
February.....	98.4	February.....	98.4	February.....	98.4
March.....	98.4	March.....	98.4	March.....	98.4
April.....	98.4	April.....	98.4	April.....	100.0
May.....	98.4	May.....	98.4	May.....	100.0
June.....	98.4	June.....	98.4	June.....	100.0
July.....	98.4	July.....	98.4	July.....	100.0
August.....	98.4	August.....	98.4	August.....	100.0
September.....	98.4	September.....	98.4	September.....	100.0
October.....	98.4	October.....	98.4		
November.....	98.4	November.....	98.4		
December.....	98.4	December.....	98.4		

Specification: Concrete, 1-3-5, ready-mixed, portland cement; per yard.

Retail: Producer to contractor, delivered to job site, city.

TABLE 300.—*Ready-mixed concrete 1-3-5*

REGION VII. WEST SOUTH CENTRAL

[Retail price indexes July–September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	100.6	September.....	102.0	March.....	102.0
February.....	100.6	October.....	102.0	April.....	102.0
March.....	100.6	November.....	102.0	May.....	102.0
April.....	100.6	December.....	102.0	June.....	102.0
May.....	100.6			July.....	102.0
June.....	100.6	1937		August.....	102.0
July.....	100.6	January.....	102.0	September.....	102.0
August.....	100.6	February.....	102.0	October.....	102.0
September.....	100.6	March.....	102.0	November.....	102.0
October.....	100.6	April.....	102.0	December.....	102.0
November.....	100.6	May.....	102.0		
December.....	100.6	June.....	102.0	1939	
		July.....	102.0	January.....	102.0
1936		August.....	102.0	February.....	102.0
January.....	102.0	September.....	102.0	March.....	96.0
February.....	102.0	October.....	102.0	April.....	96.0
March.....	102.0	November.....	102.0	May.....	96.0
April.....	102.0	December.....	102.0	June.....	96.0
May.....	102.0			July.....	96.0
June.....	102.0	1938		August.....	102.0
July.....	102.0	January.....	102.0	September.....	101.7
August.....	102.0	February.....	102.0		

Specification: Concrete, 1-3-5, ready-mixed, portland cement; per yard.

Retail: Producer to contractor, delivered to job site, city.

TABLE 301.—*Ready-mixed concrete, 1-3-5*

REGION VIII. ROCKY MOUNTAIN

[Retail price indexes—July–September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	107.2	September.....	107.2	March.....	100.0
February.....	107.2	October.....	107.2	April.....	100.0
March.....	107.2	November.....	107.2	May.....	100.0
April.....	107.2	December.....	107.2	June.....	100.0
May.....	107.2			July.....	100.0
June.....	107.2	1937		August.....	100.0
July.....	107.2	January.....	107.2	September.....	100.0
August.....	107.2	February.....	107.2	October.....	100.0
September.....	107.2	March.....	107.2	November.....	100.0
October.....	107.2	April.....	107.2	December.....	100.0
November.....	107.2	May.....	107.2		
December.....	107.2	June.....	107.2	1939	
		July.....	107.2	January.....	100.0
1936		August.....	107.2	February.....	100.0
January.....	107.2	September.....	107.2	March.....	100.0
February.....	107.2	October.....	107.2	April.....	100.0
March.....	107.2	November.....	107.2	May.....	100.0
April.....	107.2	December.....	107.2	June.....	100.0
May.....	107.2			July.....	100.0
June.....	107.2	1938		August.....	100.0
July.....	107.2	January.....	100.0	September.....	100.0
August.....	107.2	February.....	100.0		

Specification: Concrete, 1-3-5, ready-mixed, portland cement; per yard.

Retail: Producer to contractor, delivered to job site, city.

TABLE 302.—*Ready-mixed cement, 1-3-5*

REGION IX. PACIFIC

[Retail price indexes—July-September 1939=100.0]

Year and month	Retail index	Year and month	Retail index	Year and month	Retail index
1935		1936—Continued		1938—Continued	
January.....	114.8	September.....	114.8	March.....	114.8
February.....	114.8	October.....	114.8	April.....	114.8
March.....	121.9	November.....	114.8	May.....	114.8
April.....	121.9	December.....	114.8	June.....	114.8
May.....	126.7			July.....	114.8
June.....	126.7	1937		August.....	114.8
July.....	127.1	January.....	114.8	September.....	114.8
August.....	127.1	February.....	114.8	October.....	108.6
September.....	127.1	March.....	114.8	November.....	108.6
October.....	127.1	April.....	114.8	December.....	108.6
November.....	127.1	May.....	114.8		
December.....	127.1	June.....	114.8	1939	
		July.....	114.8	January.....	108.2
1936		August.....	114.8	February.....	108.2
January.....	114.8	September.....	114.8	March.....	108.2
February.....	114.8	October.....	114.8	April.....	108.2
March.....	114.8	November.....	114.8	May.....	100.0
April.....	114.8	December.....	114.8	June.....	100.0
May.....	114.8			July.....	100.0
June.....	114.8	1938		August.....	100.0
July.....	114.8	January.....	114.8	September.....	100.0
August.....	114.8	February.....	114.8		

Specification: Concrete, 1-3-5, ready-mixed, portland cement; per yard.

Retail: Producer to contractor, delivered to job site, city.

APPENDIX A

DIFFERENTIALS IN PRICES BETWEEN A LARGE CITY AND ITS OUTLYING DISTRICTS

In the course of this survey, building material prices in a large city, Cleveland, were compared with prices for the same products in three nearby smaller towns in Ohio—Painesville, Medina, and Wooster,¹ in order to discover any differentials in building material costs beyond the limits of the metropolitan area where building has been increasing rapidly in recent years. This comparison showed that, for most building materials distributed on other than a local scale, prices were lower in Cleveland than in the surrounding territory.² The results of this analysis are presented below, accompanied by an explanation of the market factors involved.

Prices, retailer or dealer, to contractor, delivered at the job site, were collected in each city. Several quotations were obtained on each item and representative series were selected for use in this study. The results are shown below:

Prices relative to Cleveland	Number of commodities		
	Medina	Painesville	Wooster
Higher than Cleveland.....	20	21	16
Same as Cleveland.....	2	3	2
Lower than Cleveland.....	5	4	3

In all of the small cities more than three-fourths of the prices were higher than in Cleveland. Two or three prices were identical with Cleveland and in only one place, Medina, were as many as five items lower than in Cleveland. (See table 1.)

In general, this can be accounted for by the difference in wholesale prices which resulted from the addition of freight to the Cleveland price. Many of the products are manufactured in Cleveland or the surrounding area; on others, distributors maintain large warehouses with supplies of the materials; some are shipped to Cleveland for pickup by dealers or consumers.

¹ The populations and distances from Cleveland are as follows:

	Population	Miles
Painesville.....	10,944	28
Medina.....	4,071	32
Wooster.....	10,742	45

² This phase of the study was confined to Cleveland and the surrounding area. Whether generalizations drawn therefrom have equal applicability to other metropolitan and outlying districts was not determined.

Building material dealers in the smaller localities are frequently unable to realize the benefits of carlot buying and hence wholesale costs are higher. Transportation costs from plant or warehouse to destination are higher on the smaller quantities. In addition, the prices of the product at the plant frequently are higher for smaller quantities.

For many of the building material items sold on a zone or freight equalization basis, the actual list prices are higher on less-than-carlot shipments than they are on carlot quantities. For example, in the case of insulation board this spread between carlot (56,000 square feet) and 7,000 square feet is \$3 per thousand. On certain types of roofing the carlot list is 86 percent of the less-than-carlot list.

The dealers in small areas such as Medina, Painesville, and Wooster generally purchase the materials from manufacturers' representatives and distributors, warehouses and yards, located in the adjacent large city, in this case Cleveland. They buy in relatively small quantities and pay truckage or cost of railroad freight to destination, and therefore the wholesale price is relatively high. Freight is an important element because of the weight of the materials involved. The amounts involved for a few products are as follows:

Material	Less-than-carlot freight rates per 100 pounds		
	Paines- ville	Medina	Wooster
Hydrated lime.....	\$0.21	\$0.22	\$0.27
Insulation board.....	.35	.37	.46
Plaster.....	.21	.22	.27
Roofing.....	.23	.24	.30
Cement.....	.21	.22	.27

If purchased in small lots and shipped out of Cleveland, the transportation charges are considerable. For example, a square of 210 pounds roofing shingles wholesaling at \$4.25 in Cleveland would cost about 65 cents more in Wooster because of transportation charges. Freight on this item from Cleveland would amount to 50 cents on sales to Painesville and 52 cents to Medina.

However, on products which are marketed in a small local area, like brick, sand, gravel, and stone, the prices generally are lower in the outlying towns than they are in the large city. The kiln or pit on these products is usually located either at the extreme edge of the city or outside the city. Retail prices for these products were found to be lower in the three small cities surveyed than in Cleveland.

These differentials in prices of building materials may be compared with the differences in wage rates in the same localities, which show a contrasting picture.³ Whereas in the case of materials prices are higher in the small localities, wage rates in construction trades are higher in the metropolitan center. The comparison for important occupations follows:

³ Work Projects Administration, Hourly Wage Rates for W. P. A. and For Private and Other Public Construction, 1938, Selected Occupations, Washington, D. C., July 1939.

Wage rates relative to Cleveland	Number of occupations		
	Medina	Painesville	Wooster
Higher than Cleveland.....	0	0	0
Same as Cleveland.....	2	3	1
Lower than Cleveland.....	8	7	9

In no trade were the wages lower in Cleveland than in the three outlying localities. Cleveland rates were higher in 7 of 10 occupations studied in Painesville, 8 of 10 in Medina, and in 9 of 10 trades in Wooster, Ohio. (See table 2.)

In other words, in this metropolitan area, probably typical of many sections, the differentials in labor costs and in material costs tend to compensate each other to some extent. Wage rates are higher but material costs are lower in the large city than in the outlying communities.

TABLE 1.—*Retail prices of building materials in Cleveland and vicinity, October 1939*

[Prices charged the contractor for materials delivered to job site]

Material	Unit	Prices				Index numbers (Cleveland prices=100.0)			
		Cleveland	Medina	Painesville	Wooster	Cleveland	Medina	Painesville	Wooster
Lime (hydrated).....	Ton.....	\$14.00	\$16.00	\$18.00	\$18.00	100	114	129	129
Insulation board.....	1,000 feet.....	45.00	47.00	47.50	44.00	100	104	106	98
Plaster.....	Ton.....	16.00	18.00	18.00	18.00	100	113	113	113
Roofing.....	Square.....	5.44	5.75	5.50	5.75	100	106	101	106
Cement.....	Barrel.....	2.52	2.47	2.60	2.80	100	98	103	111
Lumber, southern pine boards.....	1,000 feet.....	37.50	42.00	42.30	42.00	100	112	113	112
Oak flooring.....	1,000 feet.....	78.75	90.00	88.20	81.00	100	114	112	103
Dimension fir.....	1,000 feet.....	45.00	46.00	47.70	51.30	100	102	106	114
Ponderosa pine boards, No. 3.....	1,000 feet.....	46.75	45.00	45.00	49.50	100	96	96	106
Millwork, fir doors.....	Each.....	2.94	-----	3.97	3.97	100	-----	135	135
Ponderosa pine window:									
Glazed.....	Each.....	1.63	2.20	2.46	2.45	100	135	151	150
Frames.....	Each.....	3.37	4.41	3.87	4.05	100	131	115	120
Ponderosa pine doors.....	Each.....	3.43	4.60	5.16	5.16	100	134	150	150
Brick:									
Common.....	1,000.....	16.00	16.00	20.00	16.00	100	100	125	100
Face.....	1,000.....	19.00	23.00	23.00	23.00	100	121	121	121
Tile, partition.....	1,000.....	58.00	65.00	-----	62.60	100	112	-----	108
Sewer pipe.....	Foot.....	.18	.17	.18	.20	100	94	100	111
Gravel.....	Ton.....	1.75	1.63	1.75	1.50	100	93	100	86
Sand.....	Ton.....	1.75	1.45	1.50	1.30	100	83	86	74
Stone.....	Ton.....	2.50	2.88	2.65	2.75	100	115	106	110
Boilers:									
Heating.....	Each.....	101.70	107.00	104.50	-----	100	105	103	-----
Range.....	Each.....	5.10	6.25	6.25	-----	100	123	123	-----
Closets.....	Each.....	-----	20.00	18.70	-----	-----	-----	-----	-----
Lavatory.....	Each.....	11.53	13.50	11.50	-----	100	117	100	-----
Radiation.....	Foot.....	.32	.32	.32	.32	100	100	100	100
Sink.....	Each.....	17.20	21.00	18.65	-----	100	122	108	-----
Bath tub.....	Each.....	46.45	51.20	53.05	-----	100	110	114	-----
Laundry tub.....	Each.....	10.50	12.30	10.00	-----	100	117	95	-----
Mixed concrete:									
1-2-4.....	Cubic yard.....	6.95	9.00	7.60	-----	100	129	109	-----
1-3-5.....	Cubic yard.....	6.35	-----	7.35	-----	100	-----	116	-----
Average.....						100	111	112	112

TABLE 2.—*Prevailing wage rates for selected construction occupations in Cleveland, Ohio, and vicinity, 1938*

Occupation	Hourly wage rates in—			
	Cleveland	Painesville	Medina	Wooster
Unskilled.....	\$0.90	\$0.60	\$0.50	-----
Bricklayer.....	1.63	1.63	1.50	\$1.50
Hod carrier.....	.90	.72	.80	.80
Carpenter.....	1.38	1.38	1.13	1.25
Cement finisher.....	1.38	-----	1.38	1.25
Painter.....	1.30	1.20-1.30	1.15	1.15
Plasterer.....	1.63	1.63	1.63	1.50
Plumber.....	1.50	1.23-1.50	1.38	1.28
Roofer.....	1.45	1.00	1.25	1.00
Tile layer.....	1.50	1.00	1.25	1.50
Tile layer helper.....	1.00	.72	-----	.80

Source: Work Projects Administration, Hourly Wage Rates for W. P. A. and for Private and Other Public Construction, 1938, Selected Occupations, Washington, D. C., July 1939.

APPENDIX B

MISCELLANEOUS TABULAR DATA

TABLE 1.—Cost of building the same standard house in representative cities in June 1937¹

Federal home-loan bank districts, States, and cities	Total build- ing cost June 1937	Federal home-loan bank districts, States, and cities	Total build- ing cost June 1937
No. 1. Boston:		No. 8. Des Moines:	
Connecticut:		Iowa: Des Moines	\$6,483
Hartford	\$6,365	Minnesota:	
New Haven	5,933	Duluth	6,373
Maine: Portland	5,916	St. Paul	6,911
Massachusetts: Boston	6,487	Missouri:	
New Hampshire: Manchester	5,888	Kansas City	6,198
Rhode Island: Providence	5,932	St. Louis	6,512
Vermont: Rutland	5,710	North Dakota: Fargo	6,062
No. 4. Winston-Salem:		South Dakota: Sioux Falls	6,263
Alabama: Birmingham	6,077	No. 11. Portland:	
District of Columbia: Washing- ton	6,234	Idaho: Boise	6,273
Florida:		Montana: Great Falls	7,134
Tampa	5,716	Oregon: Portland	5,990
West Palm Beach	6,411	Utah: Salt Lake City	6,375
Georgia: Atlanta	5,410	Washington:	
Maryland:		Seattle	6,642
Baltimore	5,402	Spokane	6,796
Cumberland	5,732	Wyoming: Casper	
North Carolina:		No. 3. Pittsburgh:	
Asheville	4,968	Delaware: Wilmington	5,737
Raleigh	5,580	Pennsylvania:	
Salisbury	4,746	Harrisburg	6,186
South Carolina: Columbia	4,886	Philadelphia	5,944
Virginia:		Pittsburgh	6,730
Richmond	5,248	West Virginia: Charleston	5,857
Roanoke	5,391	No. 5. Cincinnati:	
No. 7. Chicago:		Kentucky:	
Illinois:		Lexington	5,887
Chicago	7,260	Louisville	6,111
Peoria	6,833	Ohio:	
Springfield	6,980	Cincinnati	6,321
Wisconsin:		Cleveland	6,756
Milwaukee	6,780	Columbus	6,352
Oshkosh	6,087	Tennessee:	
No. 10. Topeka:		Memphis	5,704
Colorado: Denver	6,712	Nashville	5,421
Kansas: Wichita	5,927	No. 9. Little Rock:	
Nebraska: Omaha	5,969	Arkansas: Little Rock	5,285
Oklahoma: Oklahoma City	5,823	Louisiana:	
No. 2. New York:		New Orleans	5,911
New Jersey:		Shreveport	5,961
Atlantic City	6,173	Mississippi: Jackson	5,849
Camden	5,866	New Mexico: Albuquerque	6,358
Newark	6,474	Texas:	
New York:		Dallas	6,143
Albany	6,048	Houston	6,391
Buffalo	6,501	San Antonio	6,284
White Plains	6,857	No. 12. Los Angeles:	
No. 6. Indianapolis:		Arizona: Phoenix	6,742
Indiana:		California:	
Evansville	5,816	Los Angeles	6,015
Indianapolis	5,890	San Diego	6,141
South Bend	6,395	San Francisco	6,407
Michigan:		Nevada: Reno	6,641
Detroit	6,379		
Grand Rapids	5,560		

¹ Source: Federal Home Loan Bank Board.

The house on which costs are reported is a detached 6-room home of 24,000 cubic feet volume. Living room, dining room, kitchen, and lavatory on first floor; 3 bedrooms and bath on second floor. Exterior is wide-board siding with brick and stucco as features of design. Best quality materials and workmanship used throughout.

The house is not completed ready for occupancy. It includes all fundamental structural elements, an attached 1-car garage, an unfinished cellar, an unfinished attic, a fireplace, essential heating, plumbing, and electric wiring equipment, and complete insulation. It does not include wallpaper nor other wall nor ceiling finish on interior plastered surfaces, lighting fixtures, refrigerators, water heaters, ranges, screens, weather stripping, nor window shades.

Reported costs include, in addition to material and labor costs, compensation insurance, an allowance for contractor's overhead and transportation of materials, plus 10 percent for builder's profit.

Reported costs do not include the cost of land nor of surveying the land, the cost of planting the lot, nor of providing walks and driveways; they do not include architect's fee, cost of building permit, financing charges, nor sales costs.

In figuring costs, current prices on the same building materials list are obtained from the same reputable contractors and operative builders.

TABLE 2.—*Dollar volume of residential building for which permits were issued 1937-39, and weighting factors for 50 selected cities*

City	Total permit valuation for new residential building 1937-39 ¹	Weighting factor	City	Total permit valuation for new residential building 1937-39 ¹	Weighting factor
Portland, Maine	\$895,845	0.069	Richmond, Va.	\$4,611,501	0.357
Manchester, N. H.	1,243,447	.096	Charlotte, N. C.	7,334,527	.568
Burlington, Vt.	618,000	.048	Charleston, S. C.	2,626,607	.203
Boston, Mass.	18,764,450	1.452	Atlanta, Ga.	13,621,726	1.054
Providence, R. I.	2,363,850	.183	Miami, Fla.	28,898,555	2.237
Hartford, Conn.	2,515,641	.195	Louisville, Ky.	10,745,895	.832
New York, N. Y.	528,773,375	40.928	Memphis, Tenn.	11,273,940	.873
Trenton, N. J.	2,052,987	.159	Birmingham, Ala.	4,650,915	.360
Philadelphia, Pa.	39,875,381	3.086	Jackson, Miss.	3,943,917	.305
Cleveland, Ohio	15,334,881	1.187	Little Rock, Ark.	1,733,393	.134
Detroit, Mich.	112,040,503	8.672	Oklahoma City, Okla.	10,589,695	.820
Indianapolis, Ind.	12,372,541	.958	Austin, Tex.	10,907,141	.844
Chicago, Ill.	42,256,012	3.271	Houston, Tex.	40,656,334	3.147
Milwaukee, Wis.	10,101,975	.782	New Orleans, La.	16,864,840	1.305
Minneapolis, Minn.	17,448,158	1.351	Butte, Mont.	112,145	.009
Fargo, N. Dak.	781,800	.061	Boise, Idaho	1,862,385	.144
Sioux Falls, S. Dak.	1,698,365	.131	Cheyenne, Wyo.	2,387,687	.185
Des Moines, Iowa	6,120,336	.474	Denver, Colo.	13,788,351	1.067
Omaha, Nebr.	6,179,020	.478	Salt Lake City, Utah	7,757,592	.600
Wichita, Kans.	4,297,613	.333	Reno, Nev.	2,913,400	.226
St. Louis, Mo.	12,894,603	.998	Phoenix, Ariz.	4,003,805	.310
Wilmington, Del.	2,410,596	.187	Albuquerque, N. Mex.	3,543,783	.274
Baltimore, Md.	23,740,455	1.838	Seattle, Wash.	11,482,010	.889
Washington, D. C.	64,981,408	5.030	Portland, Oreg.	12,565,270	.973
Charleston, W. Va.	7,232,494	.560	Los Angeles, Calif.	126,098,493	9.760

¹ U. S. Bureau of Labor Statistics, Division of Construction and Public Employment.

TABLE 3.—*Index numbers of wholesale prices at low and high points, 1935 to September 1939*

[July-September 1939=100.0]

Material	January 1935	Low		High		Ratio high to low
		Date	Index	Date	Index	
Insulation board.....	100.0	December 1935....	86.7	January-August 1935, April 1936.	100.0	115.3
Plaster.....	100.3	May-June 1938....	99.4	April-August 1935.	101.5	102.1
Roofing.....	112.3	March 1939.....	98.5	March-April 1937....	129.7	137.7
Lime, hydrated.....	103.0	September-December 1936.	93.8	December 1937.....	106.7	113.8
Paint:						
Outside.....	102.6	December 1936-March 1937.	94.0	January 1935-August 1939.	102.6	109.1
Inside.....	107.0	September 1939....	98.7	January 1935-November 1936.	107.0	108.4
Enamel.....	85.0	January - August 1935.	85.0	September 1939....	102.2	120.2
Varnish.....	87.4	do.....	87.4	do.....	103.9	118.9
White lead.....	93.4	April-September 1938.	89.3	March-August 1937.	108.1	121.1
Linseed oil.....	98.3	September 1935....	92.6	July-August 1937....	121.5	131.2
Turpentine.....	177.8	September 1938....	85.6	February 1935....	186.2	217.5
Dimension, fir No. 1.....	94.9	January-April 1935.	94.9	March-August 1937.	108.1	11.9
Flooring, oak, red.....	103.3	December 1935-September 1936.	83.8	September 1937....	120.9	145.3
Boards, ponderosa pine No. 3.	100.2	October 1936.....	92.7	March-October 1937.	106.2	114.6
Door, Fir No. 1.....	105.1	September 1939....	100.0	August-November 1937.	124.8	124.8
Window, Ponderosa pine No.1.	89.2	January 1935-August 1935.	89.2	September 1937-December 1937.	109.8	123.1
Boiler, heating.....	96.1	November 1937-March 1938.	90.3	September-October 1937.	111.4	123.4
Radiation.....	83.0	January-July 1935.	83.0	June 1938.....	100.0	120.5
Boiler, range.....	86.2	January 1935-April 1936.	86.2	April 1937-February 1938.	120.2	139.4
Closet.....	94.2	January-February 1935.	94.2	February 1939....	100.0	106.2
Lavatory.....	96.6	April-June 1935....	92.2	April-July 1937....	108.6	117.8
Sink.....	88.0	do.....	84.5	April 1937.....	109.5	129.6
Tub, bath.....	84.7	January-March 1935.	84.7	August-December 1937.	103.6	122.3
Brick:						
Common.....	90.1	August-December 1935.	90.0	April-August 1937.	100.9	112.1
Face.....	92.1	January-December 1935.	92.1	February 1939....	100.0	108.6
Tile, floor.....	108.3	December 1936-February 1937.	99.2	May-August 1937.	109.1	110.0
Pipe, sewer.....	99.1	April-May 1935....	98.1	June-December 1937.	100.1	102.0
Glass.....	92.1	January-December 1935.	92.1	January 1938-September 1939.	100.0	108.6
Sand.....	98.0	April-May 1937....	94.5	May 1939.....	101.8	107.7
Gravel.....	97.9	March-April 1937.	93.2	December 1938....	109.4	117.4
Stone.....	102.5	November 1936....	95.8	December 1937....	108.9	113.7
Concrete, 1-3-5.....	104.0	May-July 1939....	99.8	May-June 1938....	105.4	105.6

¹ Series begins January 1937.

TABLE 4.—*Index numbers of retail prices at low and high points, 1935 to September 1939*

[July–September 1939=100.0]

Material	January 1935	Low		High		Ratio high to low
		Date	Index	Date	Index	
Insulation board.....	99.2	January 1936 and 1937.....	99.0	June 1939, on.....	100.0	101.0
Plaster.....	106.0	September 1939.....	97.7	December 1937.....	106.2	108.7
Roofing.....	117.6	July–September 1939.....	100.0	July–September 1937.....	123.8	123.8
Lime, hydrated.....	102.7	do.....	100.0	July 1936.....	103.6	103.6
Paint:						
Outside.....	104.3	September 1939.....	97.4	May 1937–April 1938.....	104.9	107.7
Inside.....	101.1	June 1938–September 1939.....	100.0	October–December 1935.....	101.2	101.2
Enamel.....	98.0	January–December 1935.....	98.0	January–September 1939.....	100.0	102.0
Varnish.....	100.1	June 1938.....	99.5	October 1935–November 1936.....	100.6	101.1
White lead.....	97.8	March–September 1938.....	91.1	March–December 1937.....	106.7	117.1
Linseed oil.....	98.7	August 1938.....	96.6	August–September 1937.....	111.4	115.3
Turpentine.....	126.3	August 1939.....	98.9	January 1936.....	128.9	130.3
Dimension, fir No. 1.....	96.1	April 1935.....	95.3	February 1937.....	102.9	108.0
Flooring, oak, red.....	93.5	December 1935.....	90.0	June and August 1937.....	108.9	121.0
Boards:						
Ponderosa pine No. 3.....	91.3	January–February 1935.....	91.3	June–August 1937.....	105.8	115.9
Northern pine No. 3.....	92.7	January–April 1935.....	92.7	May 1938.....	108.3	116.8
Door, fir No. 1.....	96.2	January–June 1935.....	96.2	September 1939.....	100.1	104.1
Boiler, heating.....	100.1	April 1938.....	97.5	September 1937.....	106.0	108.7
Radiation.....	90.4	January–May 1935.....	90.4	July 1938.....	100.0	110.6
Boiler, range.....	100.5	August 1938.....	99.9	January–February 1938.....	104.0	104.1
Closet.....	94.2	January–February 1935.....	94.2	February 1939.....	100.0	106.2
Lavatory.....	97.4	April–June 1935.....	92.9	April–July 1937.....	108.6	116.9
Sink.....	88.0	do.....	84.5	April 1937.....	109.5	129.6
Tub, bath.....	84.7	January–March 1935.....	84.7	August–December 1937.....	103.6	122.3
Brick:						
Common.....	96.1	November 1935.....	95.9	April–May 1939.....	101.6	105.9
Face.....	94.8	January–June 1935.....	94.8	August–September 1938.....	100.4	105.9
Pipe, sewer.....	93.2	October–November 1935.....	90.7	April 1939.....	100.0	110.3
Sand.....	98.0	April–May 1937.....	94.5	May 1939.....	101.8	107.7
Gravel.....	97.9	March–April 1937.....	93.2	December 1938.....	109.4	117.4
Stone.....	102.5	November 1936.....	95.8	December 1937.....	108.9	113.7
Concrete, 1–3–5.....	104.0	May–July 1939.....	99.8	May–June 1935.....	105.4	105.6

¹ Series begins January 1937.

APPENDIX C

COMMODITY SPECIFICATIONS FOR BUILDING MATERIALS INCLUDED IN SURVEY

INSULATION BOARD

Specification: Board, building, insulation, standard $\frac{1}{2}$ by 48 inches, standard lengths; per M square feet.

Wholesale: Carlots, manufacturer to retail distributor, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

PLASTER

Specification: Plaster, neat, base coat, gypsum; per ton, in 100-pound paper bags.

Wholesale: Carlots, manufacturer to retail distributor, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

ASPHALT STRIP SHINGLE ROOFING

Specification: Roofing, asphalt strip shingles, square butt, three in 1 strip, approximately 210 pounds per square; per square.

Wholesale: Carlots, manufacturer to retail distributor, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

PORTLAND CEMENT

Specification: Cement, portland; per barrel.

Wholesale: Gross in cloth, carlots, manufacturer to dealer, f. o. b. cars destination.

Retail: In paper bags, dealer to contractor, delivered to job site, city.

HYDRATED LIME

Specification: Lime, hydrated, building, mason's, in paper bags; per ton.

Wholesale: Carlots, producer to retail dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

LUMP LIME

Specification: Lime, lump, common, bulk; per ton.

Wholesale: Carlots, producer to retail dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

OUTSIDE HOUSE PAINT

Specification: Paint, outside house, white, gloss, mixed, first quality; per gallon, in gallon cans.

Wholesale: Manufacturer to wholesale dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

INSIDE HOUSE PAINT

Specification: Paint, inside house, white, flat, mixed, first quality; per gallon, in gallon cans.

Wholesale: Manufacturer to wholesale dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

INTERIOR ENAMEL

Specification: Enamel, interior, white, quick-drying, gloss, mixed, first quality; per gallon, in gallon cans.

Wholesale: Manufacturer to wholesale dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

INTERIOR VARNISH

Specification: Varnish, interior, mixed, first quality; per gallon, in gallon cans.

Wholesale: Manufacturer to wholesale dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

WHITE LEAD

Specification: Lead, white, carbonate, in oil, first quality; per pound, in kegs.

Wholesale: Producer to retail dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

LINSEED OIL

Specification: Oil, linseed, raw.

Wholesale: Per pound, in barrels, carlots, producer to retail dealer, f. o. b. cars destination.

Retail: Per gallon; dealer to contractor, delivered to job site, city.

TURPENTINE

Specification: Turpentine, gum spirits; per gallon.

Wholesale: In barrels, carlots; producer to retail dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

ZINC OXIDE

Specification: Zinc oxide, French process; per pound, in bags.

Wholesale: Carlots; producer to retail dealer, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

DOUGLAS FIR DIMENSION

Specification: Douglas fir, dimension, No. 1 common, 2- by 4-inch by 16-foot, S4S; per M board feet.

Wholesale: Carlots in mixed cars, mill to retail yard, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

OAK FLOORING

Specification: Oak, red, flooring, select, plain, $1\frac{3}{16}$ - by $2\frac{1}{4}$ -inch face, average length 4 feet; per M board feet.

Wholesale: Carlots in mixed cars, mill to retail yard, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

SOUTHERN PINE BOARDS

Specification: Pine, southern, boards, No. 2 common, 1 by 8 inches, standard lengths, short leaf; per M board feet.

Wholesale: Carlots in mixed cars, mill to retail yard, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

PONDEROSA PINE BOARDS

Specification: Pine, ponderosa, boards, No. 3 common, 1 by 8 inches, random lengths; S2 or 4S; per M board feet.

Wholesale: Carlots in mixed cars, mill to retail yard, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

NORTHERN PINE BOARDS

Specification: Pine, white, northern, boards; No. 3, 1 by 8 inches, standard lengths; per M board feet.

Wholesale: Carlots in mixed cars, mill to retail yard, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

DOUGLAS FIR INTERIOR DOORS

Specification: Doors, Douglas fir, No. 1, interior, five cross panels, solid stiles and rails, 2 feet 8 inches by 6 feet 8 inches by $1\frac{3}{8}$ inches; each.

Wholesale: Carlots in mixed cars, manufacturer to jobber, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

PONDEROSA PINE INTERIOR DOORS

Specification: Doors, ponderosa pine, No. 1, interior, five cross panels, solid stiles and rails, 2 feet 8 inches by 6 feet 8 inches by 1½ inches; each.

Wholesale: Carlots in mixed cars, manufacturer to jobber, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

PONDEROSA PINE WINDOWS

Specification: Windows, ponderosa pine, No. 1, two light, check rail, 1½ inches thick, 24 by 24 inches, glass size, "western" opening; each.

Wholesale: Open, carlots in mixed cars, manufacturer to jobber, f. o. b. cars destination.

Retail: Glazed and/or open, dealer to contractor, delivered to job site, city.

PONDEROSA PINE WINDOW FRAMES

Specification: Window frames, ponderosa pine, clear grade, for frame building, two light, 26 by 28 inches, glass size, plain drip cap, solid sill; each.

Wholesale: Carlots in mixed cars, manufacturer to jobber, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

SOUTHERN PINE WINDOW FRAMES

Specification: Window frames, southern pine, for frame building, two light, f or 26 by 28 inches, glass size, plain drip cap, solid sill; each.

Wholesale: Carlots in mixed cars, manufacturer to jobber, f. o. b. cars destination.

Retail: Dealer to contractor, delivered to job site, city.

HEATING BOILERS

Specification: Boilers, heating, hand fired, for anthracite and bituminous coal and coke, square jacketed, standard fittings, including brush and firing tools approximately 380 square feet, installed steam radiation; each.

Wholesale: Manufacturer's list with discounts, manufacturer to jobber, f. o. b. cars destination.

Retail: Distributor to plumbing contractor, delivered to job site, city.

RADIATION

Specification: Radiation, cast iron, 26 inches high; per square foot.

Wholesale: Manufacturer's list with discounts, manufacturer to jobber, f. o. b. cars destination.

Retail: Distributor to plumbing contractor, delivered to job site, city.

RANGE BOILERS

Specification: Boilers, range; 30-gallon, standard galvanized, electric weld, 85-pound working pressure; each.

Wholesale: Manufacturer's list with discounts, manufacturer to jobber, f. o. b. cars destination.

Retail: Distributor to plumbing contractor, delivered to job site, city.

COMBINATION CLOSETS

Specification: Closets, combination, vitreous china, two piece, close coupled, syphon action, round front with low tank, complete with chromium plated fittings, white sheet covered seat and cover, china bolt caps, chromium plated stop in supply; each.

Wholesale: Manufacturer's list with discounts, manufacturer to jobber, f. o. b. cars destination.

Retail: Distributor to plumbing contractor, delivered to job site, city.

ENAMELED IRON LAVATORIES

Specification: Lavatories, enameled iron, 20 by 18 inches, apron front, wall hung, separate compression faucets with plug, chain and stopper, stop in supply, P trap, all exposed brass chromium plated; each.

Wholesale: Manufacturer's list with discounts, manufacturer to jobber, f. o. b. cars destination.

Retail: Distributor to plumbing contractor, delivered to job site, city.

ENAMELED IRON SINKS

Specification: Sinks, enameled iron, 42 by 20 inches, roll rim, combination double faucet, strainer, P trap; each.

Wholesale: Manufacturer's list with discounts, manufacturer to jobber, f. o. b. cars destination.

Retail: Distributor to plumbing contractor, delivered to job site, city.

ENAMELED IRON BATH TUBS

Specification: Tubs, bath, 5-foot enameled cast iron, recess tub with apron front, complete with tub and shower fittings with transfer valve, 1½-inch connected drain and overflow, 5-foot chromium plated rod with 8-ounce white duck curtain and pins; each.

Wholesale: Manufacturer's list with discounts, manufacturer to jobber, f. o. b. cars destination.

Retail: Distributor to plumbing contractor, delivered to job site, city.

COMMON BRICK

Specification: Brick, common, building; per M.

Wholesale: Producer to dealer and user, delivered to job site.

Retail: Producer or dealer to contractor, delivered to job site, city.

FACE BRICK

Specification: Brick, face, standard colonial red, smooth; per M.

Wholesale: Producer to dealer and user, delivered to job site.

Retail: Producer or dealer to contractor, delivered to job site, city.

HOLLOW BUILDING TILE

Specification: Tile, hollow building, partition, 4 by 12 by 12 inches, three cell, scored, 16 pounds weight; per M.

Wholesale: Producer to contractor, delivered to job.

Retail: Producer or dealer to contractor, delivered to job site, city.

FLOOR TILE

Specification: Tile, floor, 1-inch hexagon, standard grade, color group 1 (white, red, or gray); per square foot.

Wholesale: Producer to contractor, delivered to job.

SEWER PIPE

Specification: Pipe, sewer, 6-foot, vitrified; per foot.

Wholesale: Producer to dealer, carlots, f. o. b. cars destination.

Retail: Producer or dealer to contractor, delivered to job site, city.

WINDOW GLASS

Specification: Glass, window, single strength, B quality.

Wholesale: 48-inch bracket; per 50 square feet, packaged, carlots, manufacturer to jobber, f. o. b. cars destination.

Retail: 24 by 24 inches. Per light, dealer to contractor, delivered to job site, city.

SAND

Specification: Sand, concrete, one-half inch maximum, No. 6 mesh screen; per ton. (Priced per ton or per yard in accordance with local custom but converted to per ton basis in all cases.)

Retail: Producer to contractor, delivered to job site, city.

GRAVEL

Specification: Gravel, coarse aggregate for concrete, 1½ inches maximum; per ton. (Priced per ton or per yard in accordance with local custom but converted to per ton basis in all cases.)

Retail: Producer to contractor, delivered to job site, city.

CRUSHED STONE

Specification: Stone, crushed, coarse aggregate for concrete, 1½ inches maximum; per ton. (Priced per ton or per yard in accordance with local custom but converted to per ton basis in all cases.)

Retail: Producer to contractor, delivered to job site, city.

READY MIXED CONCRETE 1-3-5

Specification: Concrete, 1-3-5, ready-mixed, portland cement; per yard.

Retail: Producer to contractor, delivered to job site, city.

READY MIXED CONCRETE 1-2-4

Specification: Concrete, 1-2-4, ready-mixed, portland cement; per yard.

Retail: Producer to contractor, delivered to job site, city.

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